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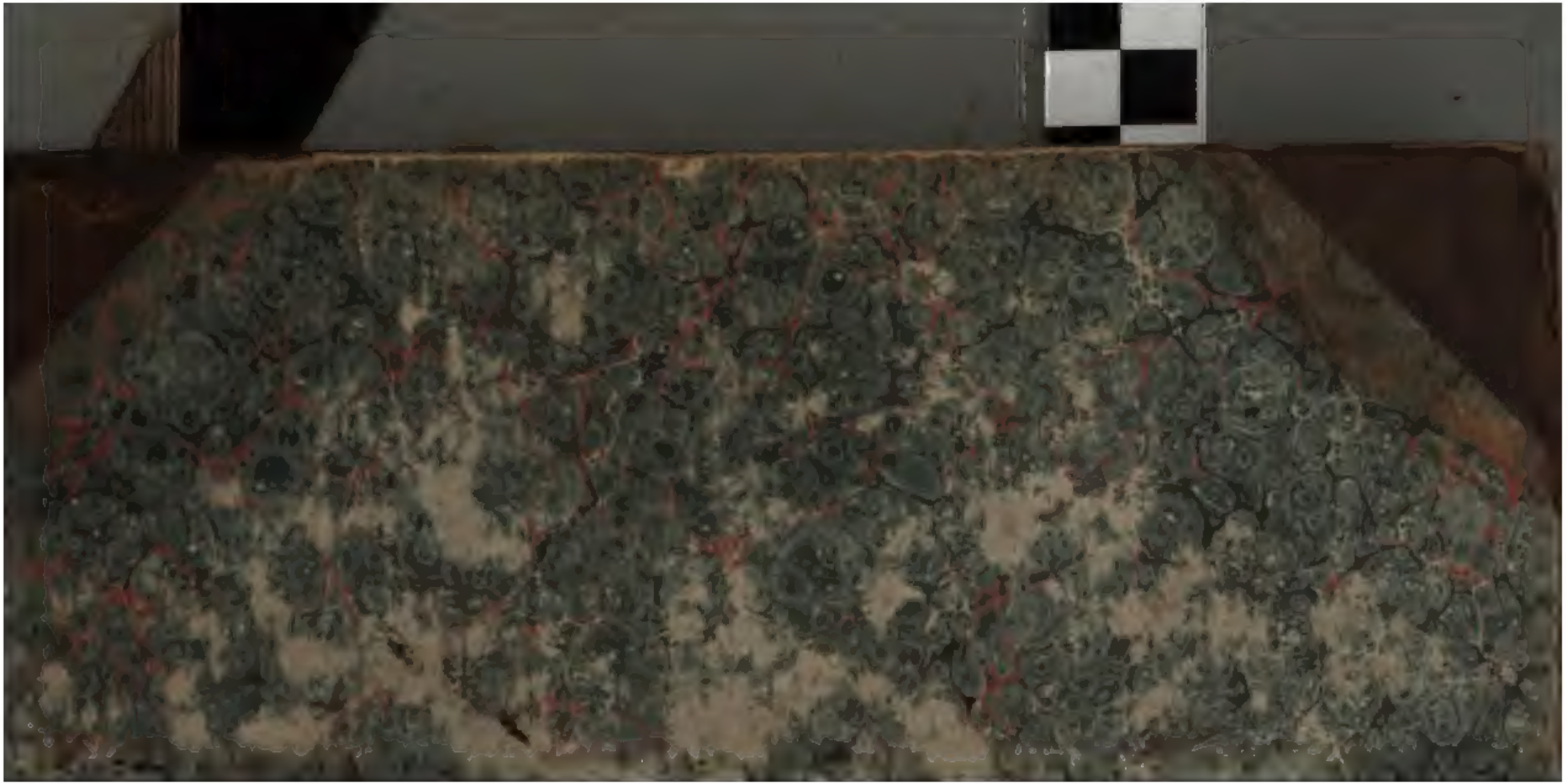

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1826

TRAVELS

IN

CHILE AND LA PLATA,

INCLUDING

ACCOUNTS RESPECTING THE

GEOGRAPHY, GEOLOGY, STATISTICS,

GOVERNMENT, FINANCES, AGRICULTURE,

MANNERS AND CUSTOMS,

AND THE

MINING OPERATIONS IN CHILE.

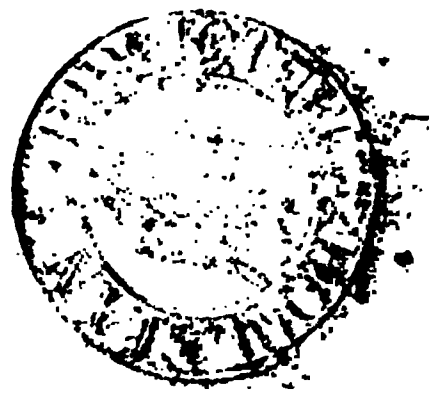
COLLECTED DURING A RESIDENCE OF SEVERAL YEARS IN THESE COUNTRIES.

BY JOHN MIERS.

ILLUSTRATED BY ORIGINAL MAPS, VIEWS, &c.

IN TWO VOLUMES.

VOL. I.



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PREFACE.

THE following work is the result of observations made on several journeys in La Plata and Chile, and during a long residence in the latter country. The Author having entered into a contract with the government of Buenos Ayres to erect in that city the machinery for a national mint, made a voyage to England in furtherance of this object. During his passage he employed most of his time in arranging his notes relative to the trade, manufactures, resources, and government of Chile, with a view to publication.

On his arrival in England, in June, 1825, he compared these notes with the subject matter of his letters and journals, written as the events occurred, and forwarded to London; these supplied him with still more extensive materials for the accomplishment of his purpose. On showing these to several literary friends, he was encouraged to extend his ob-

servations to the form under which they now appear; he was the more induced to listen to these suggestions on finding, upon his return to England, the numerous misconceptions which were entertained, and the incorrect accounts which had been published relative to these countries.

The author having in a short space of time completed the machinery before alluded to, is now obliged to return to Buenos Ayres in pursuance of his contract, and to commit his manuscript to the hands of the publisher without its having undergone the revision he had intended.

He may, therefore, with some reason, claim the indulgence of the reader, for such inaccuracies and defects of style and arrangement as he is conscious pervades it. He has diligently devoted all the time he could spare to the prosecution of this object, both in the collection of matter, and in the laborious preparation of the numerous maps, plans, and drawings, given in these volumes.

For the convenience of folding, the maps have been reduced to their present small size by the engraver. The map of the portion of Chile between Valparaiso and Mendoza is made from actual survey by the author; the other large map is nearly alto-

gether original, and prepared principally from his own observations, assisted by information from persons in the country qualified to afford it. The general map of Chile contains merely the names of places, leaving out all traces of the mountainous ramifications, which, upon so small a scale, would have caused confusion, and have made the map unintelligible. The plates are all made from drawings prepared by the author;—they are ably lithographed by Mr. Tell Baynes and Mr. E. T. Parris, and it is hoped will illustrate the subjects they are intended to explain.

It was the intention of the Author to have given some account of the natural history of Chile, but he found it impossible from want of time. In the botanical department, he made during his residence in Chile, Buenos Ayres, and Mendoza, upwards of two hundred drawings, including several novel genera; the remainder being nearly all new species of known genera, illustrated by descriptions, and he has materials for nearly an equal number of others. For the satisfaction of such of his readers as feel an interest in these pursuits he has added in the Appendix a list of the plants described in his drawings. In the ornithological department there is also added

in the Appendix a list of the drawings and descriptions he has prepared of the passeres. These several drawings are intended for subsequent publication as his other avocations may permit.

London, December 20, 1825.

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GLOSSARY

OF

THE MOST IMPORTANT SPANISH AND INDIAN WORDS USED IN THIS WORK.

Adobes, sun-dried bricks.
Aguardiente, ardent spirits.
Alcalde, justice of the peace.
Alemede, public walk.
Alfalfa, clover.
Algarroba, the caroba tree.
Alojamiento, lodging.
Araucanos, Indians in the southern parts of Chile.
Aròpe, syrup from wild berries.
Aròpe de chanar, syrup of the fruit of the chana.
Aròpe de piquillin, syrup of berries of lycium bushes.
Arriero, muleteer.
Arroba, a weight equal to twenty-five pounds Spanish.
Arroba, a measure.
Asado, roasted meat.
Asentistas, contractors, slave company.
Asesor, legal adviser.
Asientos, small pieces of land left in possession of the Indians.
Audiencia, court of justice.
Avellano, hazel nut.

Baguales, wild horses.
Balsa, a float, or raft.
Baños, baths.
Barbaruria, a species of large-grained wheat.
Bayeta, coarse woollen cloth made in Chile.
Bellota, a fine species of larch.
Benehuca, winged bug of Mendoza.
Bodega, shop, shed, in which wine is made, and stored.
Bolas, balls.
Boleta de venta, bill of sale, agreement.
Bombillo, tube through which *mate* is sipped
Botica, a large earthen wine jar.
Brazero, chaffing-dish.
Brea, mineral pitch.

Cabildo, office of justice.
Cacique, chief, king.
Calesa, an open chaise.
Calle, street.
Camara de apelaciones, court of appeal.
Camara de justicia, court of justice.
Canada, a broad ditch.
Candeal, red-bearded wheat.
Cantaro, an earthen jug.
Capachos, hide bags used in wine making.

Catita, a species of green parrot.
Cebo, tallow.
Chacara, garden.
Charqui, dried beef.
Chicha, fermented liquor prepared by the Indians.
Cigarillo, or *Cigarro en hoja,* a small cigar.
Coca, a leaf of the erythrosilum chewed by the Indians.
Cocido, must from grapes.
Colina, a sort of cane peculiar to Chile.
Commerciantes, merchants, dealers.
Contra-yerro, mark put on cattle when sold.
Consulado, commercial court of justice.
Corral, a sort of pound in which horses are kept.
Costal, a hide bag which holds a fanega of corn.
Couque, fermented liquor prepared by the Indians.
Cuesta, hill.
Curague, fermented liquor prepared by the Indians.

Diesmo, tenth, tithe.
Domadores, horse-breaker, herdsman.

Estancia, cattle farm.
Estanco, monopoly granted or retained by the government.
Estero, harbour.
Estrado, a low mud bench, generally covered with a carpet.

Fanega, a measure equal to two and a half English bushels.
Faxa, woollen sash.
Frijoles, French beans.
Frasco, a measure containing about two-thirds of a quart.

Grano, grain.
Grassa, grease.
Guanaco, an animal of the deer kind.

Habilitado, shop-keeper.
Hacienda, an estate, farm.
Haceendado, land-owner, farmer.

Intendente gobernador, chief municipal officer of a province or town.
Intendencia gobernador, his court, or office.
Juez del partido, constable of the district.
Junta, council, committee, for state purposes.

Lasso, a missile weapon made of hide.
Letrado, doctor learned in the law.
Lugares, reservoirs.

Machete, a cutlass used by the Indians.
Machi, Indian soothsayer.
Madrina, mare which leads a troop of mules.
Malal, Indian fortification.

Malon, robbery; surprise, murder.
Marco, MARK, eight ounces.
Matanza, slaughtering place.
Matesito, calabash in which yerba is infused.
Matriz, principal church.
Misa de Gracias, thanksgiving.
Monte, a game played with cards.

Onza, ounce.
Otorgar, to grant, to accede to.

Palangana, a deep silver dish.
Palos, stripes with a cane.
Pantano, lake, swamp.
Para hacer saber, to make known.
Patio, court-yard.
Payla, a large copper pan.
Peleucones, old royalists.
Petaca, a box made of hide.
Piara, a troop of eight mules.
Plaza, square.
Polucra, green vitriol.
Poricho, a sort of cloak.
Prorrata, impressment of mules and horses.
Pueblo, village.
Puente, bridge.
Pulperia, liquor-shop.
Pulpero, keeper of a pulperia.
Puna, the sensation felt on ascending high mountains.

Quadra, land-measure.
Quartel, soldier's quarters, barracks.
Quebrada, ravine, valley.
Quintal, 100 pounds Spanish.

Rancho, a hut.
Reboso, a triangular shawl.
Resguatero, custom-house officers.
Rio, river.

Samochado. See *Chicha.*
Sillon, woman's saddle.

Teniente, lieutenant.
Terremotos, violent shocks of earthquakes.
Tinajas, large earthen jars used in making wine.
Tolderias, Indian encampments.
Toqui, general-in-chief of the Indians.
Trapiche, water-mill.
Travesia, desert.
Tremblores, slight shocks of earthquakes.
Tribunal de Cuentas, account and audit office.
Trigo blanco, white wheat.

Vara, Spanish yard.
Visto bueno, approval.

Uingues, a race of Indians resembling Europeans.
Ulmen, general of Indians.
Ulpa, a mixture of barley meal and water.

Yerba, herb of Paraguay.

Zandia, water-melon.

TRAVELS

IN

CHILE AND LA PLATA.

CHAPTER I.

LONDON TO BUENOS AYRES, AND THENCE TO BARRANQUITOS.

Project for setting up Copper Mills in Chile.—Leave England.—Arrive at Buenos Ayres.—Journey from Buenos Ayres to Barranquitos, on the road to Mendoza, across the Pampa country.

OFFERS having been made to me in the year 1818 to undertake an enterprise of some magnitude in Chile, I embarked with a friend a very considerable capital in the speculation. It was our intention to erect a very extensive train of machinery in that country for refining, rolling, and manufacturing copper into sheathing. The inducements were powerful and alluring. Copper of fine quality was said to be procured in abundance from the mines of Chile, and could be purchased for about half the price it bore in the English markets. Nearly all the copper raised in the country was exported in its crude state to the East Indies, its islands, and China, in return for manufactured goods; and as all

the copper sheathing consumed in the extensive ship-building there carried on was sent from England, the inference was irresistible, that, upon the given data, an immense fortune might rapidly be made in the proposed speculation:—especially as coal might, it was said, be procured for nothing in Chile, and labour was not one-fourth of the cost it bore in England; added to this, the demand for sheet copper along the coasts of the Pacific was also said to be very great, particularly in the sugar manufactories of Peru. These tales were magnified by the South American deputies then in London; and from the two Chile ambassadors I received strong assurances that the government would afford every facility, protection, and assistance, to an enterprise of such vast importance to that infant country. Under these flattering prospects, I dispatched for Chile, in different vessels, about one hundred tons' weight of machinery, and embarked with my wife in a merchant brig, called the Little Sally, with about 70 tons of machinery, implements, and baggage; taking with me several very skilful wórkmen, engineers, millwrights, and refiners. A surgeon of considerable professional merit, Mr. Thomas Leighton, who was engaged in the Chileno naval service, offered to accompany us, an offer I rejoiced at; and it will be seen in the sequel what essential service this meritorious gentleman extended towards us in the difficulties we encountered on our journey; services which I shall ever remember with the deepest gratitude. We left the Downs on the 26th January, 1819, having been previously detained there above three weeks, by contrary winds and

violent gales; after a very favourable passage of 51 days, we made Cape Saint Mary, at the entrance of the river Plate, and after two days' careful pilotage in ascending this shoally river, we anchored on the evening of 22d March, in the outer roads of Buenos Ayres. None but very small vessels drawing little water can enter the inner roads; the outer roads, where we were obliged to anchor, are nine miles from the town. Next morning we landed, two hours being occupied in rowing from the vessel to the beach; our impressions upon landing were in sad discordance with the notions of grandeur which we had been led to form from the reports of those who had visited this city, as well as from books of travels respecting the country. The water close to the shore runs so very shoal, that our small boat could not approach nearer than 50 yards from the beach: a number of carts being in attendance to take us from the boat, we entered one of them: this vehicle was like nothing we had seen before—it was of the rudest construction—the bottom was a square frame of wood, with some sticks laid across it—it was open before and behind; the two sides about breast high were made of rough sticks, bound together with strips of hide; the wheels were of very large diameters, and of very clumsy construction, the axletree being of wood; there was not, in fact, a piece of iron in the whole structure; it was drawn by two horses abreast, one of them mounted by an Indian looking rider, of strange appearance, and still stranger costume; a loose hide was in the bottom of the cart, on which we stood, there being no seat: the sight of this first specimen

of South American handicraft was ominous, and depressing. We were landed at a kind of jetty, called the Mole, formed of rough blocks of mica slate; the houses fronting the beach I mistook for gaols, as they had no glass sashes, and the open windows were defended by iron gratings; but on entering the town, I found all the houses constructed in the same manner, mostly of one ground floor; their deserted appearance, and shabby exterior, bore more the semblance of gaols than the habitations of an industrious, civilized, and free people. As it is my intention at some future period to describe Buenos Ayres in detail—its government, statistics, and resources, I shall not now enter into any further particulars respecting the city, but proceed to describe the preparations for my journey across the country of La Plata to Chile. We went to the English hotel, at that time kept by a Mrs. Hunt, from whom we received great civility and attention; but the want of accommodation induced us to look out for better quarters, and I encountered much difficulty in procuring a lodging. We entered the houses of a great many families, whom we were told were likely to receive lodgers, they all expressed great readiness to accommodate us, until they learned that a lady was of the party, when they at once refused to receive us; at length we found a family who agreed to accommodate us during our proposed short stay in Buenos Ayres. The head of this family was Don Jose Maria Calderon; he was an old Spaniard, whose fortunes had been ruined by the events of the revolution; he was about 60 years of age, and held the situation of

vista (or searcher) at the Custom House; his wife was an agreeable, lively woman, a sister of General Belgrano, who then commanded the national patriot forces in Upper Peru; the family consisted of eight children—two sons established in business in Mendoza—another in Spain—one in the army with Belgrano—another a clerk in the Secretary of State's office—a promising lad educating in the college—and two daughters: the amount they demanded for the accommodation of myself and my wife was extremely moderate, seventeen dollars for our stay (three guineas and a half). I shall give an account of our first day's entertainment as a sample of the accommodation we received. At dinner, we were placed side by side, at the top of the family table, the usual seat of guests, according to the Spanish custom. Three black female slaves waited at table: we had about twenty dishes, of different sorts, one brought on as soon as another was removed; we had bread and vermicelli soup, different kinds of stews, and bouillis of beef, roast veal, salads of lettuce, and dishes of different vegetables, dressed in oil. Our hosts wished to press upon us plates served from every dish in succession—they were extremely solicitous to make us eat more than we wished. After dinner one of the slaves said a long unintelligible grace; upon the conclusion of which all the family crossed themselves upon their foreheads, mouths, and breasts: the cloth was not removed, but was kept for the dessert, which consisted of a profusion of ripe figs, peaches, nectarines, apples, pears, and oranges; nothing but water was drunk at dinner, or afterwards; a bason and towel were

brought, in which all the company washed their hands in the same water, it being first presented to us: they then rose from the table, and retired to their siesta, or afternoon's sleep.

These kind people displayed much anxiety to accommodate their meals to our taste, and provided for us at morning and evening tea and coffee, which they never were in the habit of taking themselves: their principal meal was supper, of which they partook at midnight.

The artisans brought out by me were boarded and lodged at a tavern. My first care was to arrange for the transhipment of my machinery to Chile, and the preparation for our journey. From all persons, both natives and English, I heard dreadful accounts of the state of the country: the *Montonero*, as the roving murderous brigands of Artigas, a well-known factious partisan, were called, over-ran the country between Buenos Ayres and Chile, so as nearly to intercept all communication; and our determination to cross the country was looked upon as a desperate attempt scarcely to be accomplished; but in the several accounts related to me I could not trace any sufficient evidence to induce me to lay aside my intention. The principal circumstance which produced this determination was the pregnancy of my wife: by preferring the land journey to the sea voyage, we expected we should reach Chile before the period of her accouchement. Having been invited to a conference with the Secretary of State, I consulted with him respecting my intended journey. He assured me that little danger was to be apprehended from the Montonero, as they had been driven

by the troops of Buenos Ayres to the opposite banks of the Parana into the province of Entre Rios; the interior of the country, he said, was very unsettled, and he doubted much that we could proceed along the regular post-road, but he thought we might venture across the Pampas by a more southern route. After weighing circumstances seriously, we finally resolved upon the land journey. I had brought with me from England a caravan for the purpose of crossing the country, but in this respect fresh difficulties were started: it was said that the road was cut into deep ruts; and as the width between the wheels of the carriages of the country was considerably greater than that of our English vehicles, I was assured that we should travel in the caravan with great difficulty. As all agreed in this respect, and as I did not wish to encounter the risk of stoppage upon the road, I judged it expedient to purchase a carriage at Buenos Ayres, which I was told could easily be disposed of in Mendoza. For this I paid 500 dollars, a sum, at the rate of exchange at that time, equivalent to 112*l.* 10*s.* I hired four native drivers for the journey, one for each horse intended to draw the coach. They were men accustomed to travel the road, and were acquainted with all the different routes: they were paid according to their experience, one at 50 dollars, another at 40, the third at 30, and the fourth at 25 dollars for the journey, which was computed at 900 miles.

Having, at several interviews with the Secretary of State, made him fully acquainted with the object of my journey to Chile, he suggested that greater advantages would accrue to me by settling in the La

Plata country, and pointed out Cordova as an admirable scite for the erection of my extensive machinery, dwelling with great eulogium upon the richness of the copper mines there; but the object of his greatest anxiety was the obtaining a portion of the coining machinery then on its passage from England to Chile, which I intended to offer for the use of the Chilian Government, and proffered every advantage I might wish for that it was in the power of the Government to grant, provided I could arrange my affairs so as to settle in Buenos Ayres in preference to Chile. This I assured him was now out of the question, as my measures had been already prospectively taken, and could not be cancelled. He however expressed his hope that at some future time some arrangement might be made, with this view; he offered his best wishes for the success of my enterprize, granted an unsolicited order for the transhipment of the machinery I had brought with me free of the usual transit duties, gave me a passport across the country for myself and retinue, without exacting the usual heavy stamp duty, and begged I would apply to him for any assistance it was in his power to grant. I was extremely gratified with the attentions he showed me, as a satisfactory illustration of that good disposition on the part of the South American Governments in favour of British enterprize which I had been led to expect I should assuredly meet with.

Having completed the arrangements for the transhipment of my machinery, and taken the necessary measures respecting the coach, I prepared for my departure. Horses cannot be procured for such

a journey at the several post-houses along the road but by a licence from the post-office at Buenos Ayres, for which certain charges are made. One of these charges is a tenth of the whole sum fixed by law as the price of horse-hire for the whole journey, called la decima parte: another of the charges, called la parte, is an arbitrary charge. The duties exacted at the post-office were as follows:—

	Dollars.	Reals.
La parte.....	12	1
La decima parte, one-tenth part of 293 dollars, 2 reals, the estimated charge of post-hire of eight horses to Mendoza. .	29	2
	41	3

equal to nine pounds six shillings sterling.

The charge allowed to be levied by the post-masters had been, from long established usage, fixed at the following rate for each carriage-horse, one real, 6*d.* per league on the road from Buenos Ayres to Mendoza; for each saddle-horse and each pack-horse half a real per league to San Luis, a distance of 218 leagues, and one real per league thence to Mendoza, a distance of 82 leagues. All the arrangement being completed, our departure was fixed for the 5th April.

Our whole set-out would in most other countries have appeared ludicrous. Our luggage was packed before and behind the body of the coach, and covered with hides, as was also the top of the coach. The fellies of the wheel were lashed with strips of wetted hide, which as they dried served by their contraction to strengthen them.

Other strips of hide were carried from the naves to the fellies, and twisted by means of pieces of wood, the ends of which rested on the spokes, and further strengthened the crazy wheels. There was a strong pole to the coach, which was to be drawn by four horses, harnessed, if harness it could be called, by a rope made of slips of hide fastened to the girths of the horses, for in this country a horse never draws by a collar. The leaders were in like manner harnessed to a clumsy piece of wood fastened to the end of the pole. Each horse had its rider; every thing was prepared on the evening of the 5th April, 1819, and the horses were brought out; but, as is usual in this country, so many delays occurred as to make it necessary to defer our departure till the next morning.

April 6.—About six o'clock we again made an effort to depart; our stock of provisions, consisting of bread, biscuit, tea, sugar, &c. were stowed under the seats of the coach, and several small boxes were taken into the vehicle. It was half-past eight before we were able to start; my wife, myself, and two of my men, rode inside the coach; the doctor and three others of them on horseback; we had also two pack horses loaded—all the animals were of a very sorry kind. The coach body was old, and hung by means of pieces of hide which went under it, and were supported upon four pieces of iron instead of springs, two before and two behind, secured to a sort of frame-work, which held the hind wheels to the fore-carriage instead of a perch. It was a quarter past nine before we cleared the city of Buenos Ayres, owing to many stoppages oc-

casioned by the ox carts, which were coming into the city in trains, with the daily supplies for the inhabitants.

The country for some distance, after leaving the suburbs, is principally laid out in gardens and orchards of peach and apple trees. The fences are mostly in good order, and sufficiently high, composed of American aloe, sometimes of cactus, growing so thickly as to be impenetrable by cattle—a dry ditch generally runs outside the fence.

Our course was S W by S. Our party had none of them been used to riding; they were consequently awkward enough; and this drew forth peals of laughter from the peons in our employment, as well as from the many gauchos whom we met going toward the city, and who, being accustomed to ride from the moment they are able to sit upright, are all most excellent horsemen. At ten a. m. we reached the little village of San José de Flores; at half-past eleven we reached an estancia, or cattle farm, where two or three of our postillions changed their sorry beasts. At twelve our course was W by S; then W; we were here assailed by multitudes of flies and other winged insects, which annoyed us greatly. On approaching the little village of Morron, the road turns S, and afterwards S W; the village consists of five neat brick houses, about which large flocks of pigeons were seen; immense numbers are bred here for the supply of Buenos Ayres. By this time almost all the stirrups of my equestrian companions had failed, notwithstanding they were all new, and had been purchased for the journey of the most respectable

dealers in Buenos Ayres; they were replaced without much trouble, by strips of hide cut from the covering of our baggage; the peons' knives, and their dexterity in the use of them, were of great service to us. But the necessity of replacing the broken stirrups caused considerable delay. One of my Englishmen, who had never been on horseback before, was unable to ride his horse any further, and was obliged to get up behind the coach and sit upon the luggage. The horse of another was knocked up, so that the coach was frequently stopped to allow him to come up—the horse he had recently changed being little better than the one from which he had dismounted. This afforded no small degree of mirth to two gaucho soldiers, who had overtaken us, and who amused themselves by flogging on our unfortunate Englishman's jaded horse. At length one of the soldiers lassoed a stray horse, which he saddled for the Englishman, turning the other loose; this horse, however, was no better than the other. These were but bad symptoms at the commencement of so long a journey as we had undertaken.

At half-past two we reached the first post-house at Puente de Marques: it is built of burnt bricks; its inmates were at dinner, which consisted of pottage made of maize boiled in grease.

Here we found a coach which had passed us a short time before our arrival; the travellers were a military officer and two ladies on their way to Luxan. The ladies were both seated on a little low bench, partaking of the pottage with the peasants, all eating out of the earthen vessel in which it had

been boiled or stewed, and with the same spoon which they handed round.

The nearly naked children of the poor people were squatted on the ground eating a mess in the same manner. We were cordially invited to partake of the feast with the other travellers, but we were as yet too young in travelling in this country to taste such messes, or to use the same spoon in the way we saw it used by the fair ladies and the dirty cottagers: we had to be sure some spoons in our canteen; but had we produced them on this occasion we could hardly have put them up again, but should have given them to the people of the house, and this would have been too great a privation; all were extremely civil; and we received their politeness as it was intended.

This is the first stage, and for this the charge is always double—the distance is seven leagues.

The horses provided for this stage were as bad as the worst of the hackney-coach horses in London, and were all knocked up, so as scarcely to be able to move by the time we reached the post-house. We were full five hours on the road.

We started again with fresh horses at 3 p. m., and soon passed a cottage near a bridge which crossed a rivulet. Here we paid a toll of one real. We were fairly in the country, and beyond the boundary of such civilization as the city of Buenos Ayres was calculated to produce. The country was smooth, covered with fine short grass, and had the appearance of an interminable bowling green. Our course was SW by S, then W by S, then W until we arrived at an estancia, where we changed horses. We con-

tinued our course W, and at five arrived at the Cañada de Escobar. We intended going on to Luxan, three leagues further; but our peons, who acted as our guides, recommended us to remain where we were, as it was necessary, they said, to grease the coach-wheels, and for doing this they must have day-light: much against our inclination, we acceded to the proposal. We therefore halted, having travelled this day no more than ten leagues.

The post-house of Escobar very much resembles all the similar stations on the high roads to Mendoza and Peru; an account of it will, therefore, serve for them all. It is a large hut, built of rough crooked stakes stuck into the ground; cross pieces are lashed to the uprights, with slips of hide, twigs of bushes or reeds are wattled in between the cross pieces, and tied with strips of hide. The frame thus composed is daubed over on both sides with mud, laid on with the hands. The roof is framed in the manner of the sides, with pieces tied together with hide; the ridge of the roof is supported by two poles inside of the hut, and is thatched with grass, the whole building being most rude and miserable, resembling in every thing, except its size, an Irish mud cabin. The postmaster and his family lived altogether in this one room.

By the side of this hut was another of smaller dimensions, for the use of travellers. There was neither chair, table, nor bed, in this house of accommodation; these things, or any of them, are rarely to be found in the post-houses; the only means of keeping off the bare ground is a kind of bedstead formed of four short stakes driven into the ground,

and four cross sticks lashed with strips of hide, as a frame from which a bullock's hide is stretched. Very few of these places are possessed of a door, but a hide is provided to keep out the weather. Another hut made in the same manner, often not plastered with mud, a mere wattled shed, is commonly attached to these residences, and is used for cooking. I need hardly say these huts have no windows. Some, however, of the post-houses are divided into two rooms, one of which is the shop or drinking room, the other the sleeping place; a square hole may be observed under the eaves of some of them, made to admit light and air; and these, like the door-way, are generally closed by a piece of hide, when necessary, to exclude the weather. Scarcely any are plastered or smoothed at all, but are in the rough state which dabbing on the mud with the hands gives them.

Miserable as they are, they afford some shelter to the traveller in stormy weather, although it frequently happens that they are not impervious to rain, which falls in heavy showers during the winter and in thunder storms in the summer season.

In these places the traveller may, if he pleases, find shelter from the heavy dews which fall in the night over this extensive country; these dews penetrate the clothes, and wet one through, chill one, and produce very uncomfortable sensations.

The greatest objection, at least to Europeans, in these dreary receptacles, is the incredible number of fleas, bugs, and even still more disgusting vermin. The fleas breed in the very earth; this is no exaggeration; for, however many years one of these places

may have been unoccupied, there does not appear the least diminution of these vermin. There is no exception; every hut is alike, whether it be inhabited or not; they are never swept out, nor is any filth removed; the ashes from occasional fires made in them remain from year to year.

Having resolved to remain here, the first inquiry was, could any thing be had for dinner—there was not a morsel of either meat or bread, and we were obliged to send two leagues to procure a sheep, as well as some wood to cook it. Two boys on horseback were dispatched; one returned with the sheep alive across the horse before him; the other brought the wood on a hide as a sledge, drawn by his lasso, from his saddle girth. Our peons pulled out their long knives, and one of them nearly severed the sheep's head at a stroke. It was then hung to the roof of the cooking hut by the legs, the skin was stripped off, and the carcass cut into lumps in an incredibly short space of time, and placed before the fire to roast, almost before life could be said to be extinct. The most fleshy parts were selected without any regard to the shape of the pieces; one of these was spitted on an iron used for marking cattle; the pointed end was stuck into the ground, sloping over the fire, and thus the meat was exposed to the flames of the lighted wood; the spit was occasionally turned, so that every part of the meat might be succesively presented to the fire.

This is the favourite mode of cooking, it is called *asado*; it is, however, a good mode, as the quickness of the operation prevents the loss of the gravy, which remains in the meat. The people themselves

do not remove the spit from the fire, but cut off slices, or pretty large mouthfuls, from the piece as it roasts; any such conveniencies as tables, chairs, plates, forks, &c. being unknown to them. They squat round the fire on their heels, each pulling out his knife, which he invariably carries about him day and night, and helps himself as he pleases, taking with it neither bread, salt, nor pepper. We made a good meal from the *asado*, with the help of the conveniencies we carried with us in our canteen. We had to wait, however, two hours and a half from the time of our arrival before we commenced eating.

We slept in the following manner:—I had some boards made to form a platform even with the seats of the coach, on which we made our bed; it was very uncomfortable, as the shortness of the coach did not permit us to lie at length. To me this was not of much consequence; but to my wife, in her situation, it was a real grievance, and was soon severely felt. Our peons slept on their saddles in the hut.

April 7.—We rose at six. It felt remarkably cold; this was occasioned by the heavy dew, for the thermometer was not lower than 50°. For our fare and accommodation for twelve persons, our host charged only one dollar.

The baggage on the coach being thought too heavy, a portion of it was removed, and another horse was hired to carry it.

The next stage was five leagues, the cost of which, for ten hours and the postillion, was $4\frac{1}{2}$ dollars.

At half-past seven the cavalcade left the Cañada de Escobar; our course was WNW, over a fine level plain, and an excellent flat road; the herbage was a

thick short clover. We saw many herons, plovers, and herds of wild deer.

The horses were very poor; one of them could with great difficulty be made to keep up with us. The approach to Luxan is through lanes, having on each side extensive gardens and orchards. The fruit-trees are principally peach, fig, and orange. The fences, like those in the environs of Buenos Ayres, are of aloe, and the broad-leafed cactus, called tuna. We entered the village about half-past eight, and drew up in the plaza, or square, opposite to a house on the west side, called the custom-house. As soon as the coach stopped, we were accosted by the officer whom we had met at the Puente de Marques. He had just turned out of bed, and came in his shirt and trowsers to hand my wife out of the carriage. He led her to his room, which was also his bed-room, begging her to excuse him while he finished his toilet, as it was only a *quento de militar*. He was very polite and attentive, and quickly procured milk and fruit in abundance.

I went to the house of the commandant on the north side of the plaza, and was soon introduced to him. He was very polite, and would hardly look at my passports.

I sent for the curate of the village, to whom I delivered a letter from his friend in London; he was much pleased, and offered us any assistance we might need, but we needed none that he could give. I purchased a stock of bread for three days' consumption, being told that none could be procured for that space of time. This, as it turned out, was not the case. The bread cost 1½ dollar. We paid two

reals toll for a bridge outside the town, which we should have to pass on our journey.

The houses at Luxan are all of one ground-floor, except that of the Cabildo, on the east side of the plaza, which has rooms above. They are all built with sun-burnt bricks, called *adobes*, not white-washed. The church is a small plain building, with a little turret, and a cupola top. We left Luxan at half-past nine, and soon came to the bridge for which we had paid toll: it passes over a deep ravine, which is the bed of a river in the rainy season, but now quite dry. One of my men was so completely unable to sit his horse, that he was taken into the coach, and I mounted in his stead.

We had to pass a deep cañada, a sort of broad ditch in which rushes grow: in many parts it was boggy. The horse of another of my men lost his legs, and threw his rider, which delayed us some time; but this was amply compensated by attracting the attention of a young man, a native, and an officer in the army of Buenos Ayres, who joined our company, and continued with us until we reached Mendoza. He was both agreeable and useful to us, unacquainted as we were with the customs and resources of the country, and almost ignorant of the provincial language of the Gauchos. A mile beyond this cañada we came to the cañada de Rochas, at half-past ten, distant two leagues from Luxan; here we remained only to change horses. The post-house was precisely of the same description as that at which we slept the preceding night. I paid for ten horses for the next stage, of five leagues, 4¼ dollars and for refreshment 5 reals. We started

again at eleven, the course NW, forded a cañada at half-past eleven, and soon afterwards passed another broad ditch; at twelve we came to an estancia, where we changed the coach-horses; our course was WNW. At half-past twelve we passed another fording-place; the country we had traversed was one uninterrupted plain, broken only by water-courses, which, at this season of the year were mostly dry; not the least rising ground appeared within view in any direction; not a tree was to be seen; the plain seemed boundless, and, with the exception of small spots about the estancias, wholly uncultivated.

We observed great numbers of snipes, herons, hawks, and plovers.

We saw no cattle except in the immediate neighbourhood of the estancias, and these were by no means so numerous as we expected. The herds were very small, compared with those seen eastward of Buenos Ayres.

The cattle here, and indeed all the way to Mendoza, are a smaller breed than that on the banks of the La Plata.

The stories told of the immense herds of wild cattle which rove over these plains are wholly untrue; there are not, in any of the provinces, unowned cattle, and consequently none that can be called wild. There are wild cattle to the south of La Plata, among the Indians, over whom the Spaniards have no control, and who still continue to have every thing in common; and with whom cattle, horses, and deer, are alike considered as animals of chace for the purposes of subsistence. In the estancias, the number of cattle belonging to each is always known;

they are placed under the charge of herdsmen, called *domadores*, frequently under the eye of the owners themselves. Every animal is marked, and is regularly watched, so that none stray far beyond certain limits. The *domadores* know every individual animal; and their duty is to be on horseback all day long, taking care that none go beyond the boundary. It is their duty also to collect all the cattle every night within the corrales, or pens, made for their reception. Every proprietor of an estancia has a particular mark, which is burnt in upon the skin of the animal. It is generally some initial or rude character about six inches long. Horses are marked in the same manner. When any animal changes his owner, the seller puts another of his marks, making it double; this is called the *contrayerro*, and denotes his having no longer a claim to the beast. The purchaser then affixes his mark to establish his claim. These markings are necessary in a country without fences, and where it frequently happens that herds belonging to different persons are mixed together.

Hitherto the soil appeared to be a rich fine mould, —not a pebble was to be seen—not even sand or gravel. Where cultivated, it produced luxuriantly. It needs only the hand of man to make these immense plains as productive as any prairie land can be. Except in the middle of summer, the intervals between rain are short; and the very heavy dews which fall in the dry season compensate, in a great measure, for the want of more frequent showers; it was now the autumn of the year, and the land was covered with herbage.

The horses hereabout are of rather a small breed,

half blooded, and for short distances very swift, but they are soon fatigued, and consequently not well adapted to perform the long stages they are often obliged to travel.

The few fruit-trees about the estancias were in full verdure.

At one o'clock we reached the Cañada de la Cruz; the huts at this post-house were, if possible, worse than those of Cañada de Escobar, and the inhabitants much more filthy and savage in their appearance. They had neither bread, meat, poultry, grain, nor any one edible thing; I hired ten horses to Areco, a distance of six leagues, for which I paid 5½ dollars; we remained only a quarter of an hour in effecting the relay. On setting off, the road for the first mile was W by N, and then W for three miles; at nearly two o'clock we passed a cañada, course, and soon afterwards a rivulet; these now occurred frequently; at three we crossed a *pantana*, or boggy swamp, and reached the post-house of Areco at half-past three. On applying for horses, the postmaster, whom I found afterwards to be a great rascal, advised me by no means to continue the post road. He said that the succeeding post-houses of Chacras de Ayola, Arecife, &c. had been all destroyed by the Montonero, who had carried off the horses, and terrified the inhabitants, so as to make them flee the country. He assured us that the nearest place where it would be possible to obtain a change of horses, was the village of Salto, where, at the house of a friend of his, they could be procured. Then he said we might either proceed to the NW, and again join the high road, beyond the

space which had been devastated by the Montonero, or we might strike off into the Pampa country. He strongly advised the latter, as most secure; he related several tales of the Montonero, and again assured us that no horses could be procured on the high road, nor any nearer than Salto, which he represented to be at the distance of twenty leagues; he offered to send forward relays of horses, to enable us to proceed at the usual post-rate. He told us, that, after all, the road by Salto would not lengthen our journey more than four or five leagues; and his whole deportment appeared so considerate and friendly, that we were induced to take his advice, and agree to go by Salto. Of the actual distance I could not myself judge. I had with me the best English map; but that conveyed no information on the proposed route, and was, besides, so incorrect in other respects, as to be of very little use. I found out afterwards that this fellow had deceived us; all his tales were gross exaggerations, or total falsehoods; even the distance to Salto turned out to be fourteen leagues instead of twenty, at which rate he charged us.

Finding it now too late to commence so long a stage, we determined to remain here all night; it was also necessary for our Englishmen, who, notwithstanding they had already become tolerable jockies, feared so long a day's ride as the next promised to be. Abundance of provisions were to be obtained at the Fortin de Areco, a place one league to the southward, where there is a mud fort, forming one of the several military posts, stretching from the Bay of Samborombom, at regular intervals of a

few leagues, and continuing through Salto, Rocca, Pergamino, and Rosario, forming a line of defence between the people of the province of Buenos Ayres, and the Pampa Indians. We purchased eight eggs for a rial (6*d.*); a cheese made in the country, weighing five pounds, for three rials; a sheep for two rials; we purchased also some melons; those called sandias, a species of water melon, are very good. All these (except the eggs), with the wood for cooking, were brought from the fortin by messengers dispatched on horseback. We had an excellent dinner; a portion of it at least was well cooked, by means of our military canteen, which was of the greatest service to us throughout our long and wearisome journey. We had boiled fowls, and a favourite dish of the country, made of pieces of mutton, boiled or stewed, with maize and onions, an *asado* of mutton, and melons for a dessert. The postmaster had neither plates, dishes, knives, nor forks; these were in part supplied from the canteen; and the men, who had already begun to accustom themselves to this sort of campaigning, were all well pleased. The most handy and useful among us was the doctor; he was always satisfied and cheerful, always ready, and always able to do any thing which our circumstances required. We slept as on the preceding night.

April 8.—We rose at day-break, and breakfasted on the remains of yesterday's repast. We made a trial of the *yerba*, or tea of Paraguay, infused in a tea-pot, using milk and sugar, and found it to be an excellent and agreeable substitute for China tea. We paid for eleven horses 18$\frac{1}{4}$ dollars, and started from Areco soon after eight o'clock. Our course was

WSW; then W; we crossed a rivulet, and a swamp, and soon after ten reached an estancia, where we changed horses. We had travelled in a zig-zag course, which appeared to me quite unnecessary, as the country was very level, and it led me to suspect that our guides were playing us some trick; according to their account, we had travelled five leagues; but on inquiring at the estancia, I found the distance was no more than three leagues; the deception arose from two causes: first, a desire to make out as long a course as possible, to cover the cheat practised upon us, in charging for too great a distance; and, second, from the common practice of the guides of compelling travellers to go the shortest possible distance each day, in order to keep them on the road, for their own emolument. Not the least confidence should be placed in any of these people, who are not ashamed of being detected in the grossest attempts at deception; we started again, still going in the same zig-zag course; about noon, after changing horses, we passed by a very large estancia; we changed horses at one, and again before two; these delays, as well as the course we had travelled, were intended to deceive us in the distance, to cover the fraud of our host of Areco. We reached Salto at half-past three. The son of the postmaster of Areco, who had accompanied us, requested us to wait outside of the village while he went to make inquiries—this seemed strange—there was something about his whole conduct which increased our suspicion of him, after waiting half an hour; and just as we were about to drive into the village he returned, and conducted

us to the house of a miller, the friend whom his father had spoken of. We were treated with much civility—the females paying all the attention in their power to my wife. Here the stories of the post-master of Areco were repeated with considerable exaggerations; we were told that it was quite impossible for us to go by the high road, that our course must be over the Pampas to the Puente del Sauce, and even that course was not entirely free from danger. We began to suspect the stories they told us to be fabricated; but as we had heard of the Montonero having infested the high road even before we left Buenos Ayres, we feared to encounter the risk, but resolved to seek further information. I therefore waited on the commandant of the village to ask his advice. He was very polite, told me the tales of our landlord were fallacious; that their intention was to deceive us, in order to make the most of us: that the force of Artiagas was on the opposite side of the Parana; and as General Belgrano now occupied the bridge of Rosario, the main road was quite clear; he therefore advised me to proceed to join the main road again by the cross route of Pergamino. Before I went to the commandant, our host and his people urged us to agree with them for horses, saying they were acquainted with the proprietors of the estancias on our route, and could procure relays all along; they were very attentive, and wished to prepare dinner for us. On my return from the commandant, I told them I was resolved to go to Pergamino, from which they endeavoured to dissuade me; but finding I was resolved not to take their advice, they suddenly changed their tone, said they

could furnish no horses, and behaved in such a manner as induced us to quit his house. It turned out that there was no postmaster, no horses to be had of any one, and no house or hut for our accommodation. Our travelling companion, being an officer, could not be refused horses for himself, but he had no means of procuring any for us. We went to the fort, where horses belonging to the soldiery were kept, but none could be hired. Thus the afternoon was wasted; and at the close of the day we had no chance of procuring horses, except from the friend of our host of Areco, whose house we had left, and then only on his own terms. This made me resolve to go early the next morning to the nearest estancia, about a league off, and endeavour to obtain horses to take us to the nearest posthouse. We had now no house to go to, nor, as it appeared, any means of procuring food; no meat could be had in the village; the supplies were all drawn from an estancia, three leagues distant, from which meat, &c. was brought in early in the morning, when every one purchased his daily supply; neither bread, milk, nor eggs, could be purchased; wine alone was to be procured at the pulperia, or common store. We dined on the bread and cheese we had fortunately brought with us; our men took possession of the miller's covered ox cart; and I and my wife, as usual, slept in the coach.

The mill was very rude and simple; scarcely any iron was used in its construction, wood and hide being almost the only materials. The motion was communicated by two mules, which at the end of two long poles dragged round a horizontal toothed wheel, into which a lanthorn pinion worked; this

was connected with the upper stone; the motion was exceedingly slow, for, instead of a hundred revolutions, barely ten turns were effected in a minute, so that the corn was rather crushed than ground. Precisely of this description are all the mills in the neighbourhood of Buenos Ayres. No where is there a sufficient fall of water to give the moving power; and wind-mills are far above the mechanical genius of the people of La Plata.

In our journey to-day we saw great numbers of wild deer, ducks and quails, and also large flocks of ostriches; they were of a grey colour, and appeared to be smaller than the African ostriches; they are very shy and difficult to take, running as fast as the swiftest horse.

The soil was still covered with rich pasture. The Guardia de Salto is a small village consisting of several detached houses of the kind before described, built of sun-dried bricks, and so disposed as to form two streets at right angles. Most of the houses have what they call a garden before and behind, and some were placed in the middle of a pretty large garden. The uniformity of the streets was preserved by the walls of the gardens, which, like the houses, were built with sun-dried bricks. As usual, there is a sort of a square, called the plaza, on one side of which is the quartel, a range of small miserable rooms for the use of the military stationed here. On the opposite side is the fort, a square pile of unburnt bricks, each side of which extends about twenty feet, and is about ten feet high: one side is sloped, and formed into steps, by which to ascend: on the side opposite to these steps was placed a four-pounder

swivel. The fort looked like a mud bank; it was much worn by the weather, and had a most wretched appearance.

Next morning, April 9, at day break, when about to start for the estancia, in order to procure horses, the son of the post-master of Areco offered to take us on to Chacras, the next posthouse in the Pampa country. To avoid further delay, I accepted his offer, and paid him 5½ dollars for the jonrney, he assuring me it was full six leagues, but it turned out afterwards that he had again deceived us, the distance being only five leagues. As there was no possibility of making him refund, no further notice was taken of his extortion; but we resolved to be more on our guard against the deceptions which we had reason to believe were constantly practised to the greatest extent possible.

It was a quarter past nine before we could get away from Salto; our course was NW; we crossed a considerable rivulet, which runs into the river Tercero; changed horses at an estancia soon after ten o'clock, and arrived at the post-house of Chacras at half-past eleven. Here we obtained a supply of meat, milk, and eggs, for breakfast. The miserable appearance of this place exceeded, if it be possible, the most wretched of the huts we had seen, it being built of mud and sticks, the thatch ragged, and the walls falling to pieces. The people were extremely filthy and poor. Their first salutation was a prayer for segars or tobacco. I took pity on their misery, and gave them some. I had been advised to take a supply with me, being assured that a few segars would

by the women in the rude loom of the country. They are neither fulled, scowered, nor otherwise prepared; the whole manufacture is as simple as possible. The many brilliant colours which poncho contains are woven in with great care, and are generally judiciously assorted. Some of the better sort of ponchos are woven in fancy running patterns, not unlike the style of the ancient Greek and Etruscan borders. Sometimes the yarn is so fine, that the poncho is nearly as supple and soft as silk. These are made by the Indians in Chile. The labour bestowed on these is almost beyond belief; a single poncho giving employment to a woman for more than two years.

The least bodily exertion, except riding on horseback, is avoided as much as possible by the people of this country; they will sit the whole day basking in the sun, or enjoying their favorite amusement, to which the women are particularly partial, that of picking the vermin out of each other's hair. The whole people are, notwithstanding, healthy, robust, muscular, and athletic.

As we approached Roccas the numbers of huts increased, and I remarked the utter want of curiosity in the people. It is probable that a coach with four horses had never before been seen in this unfrequented part of the country: this, and our ludicrous troop of horsemen, would, in any other country, have brought all the people to the doors of their houses; but here no one stirred; even the women and children were equally indifferent as the men, scarcely any giving themselves the trouble of looking at us, and no one in the huts stirring to notice

what was passing. The torpid state of their minds has been, and will continue to be, the great obstacle to the moral and political improvement of this country. It was nearly four o'clock when we entered Roccas. Here we found ourselves again at fault; there was no postmaster in the village, and it was necessary to send a league to obtain a change of horses. Little hope, therefore, remained of advancing any farther this day. We stopped opposite the house of the commandant, to whom I showed my passports. He was very civil, made my wife alight, and took us into his house; it was the best in the town, although it consisted of only two rooms, was built with sun-dried bricks, and thatched as usual; it was white washed within and without. The bare ground served for floors; but a few old-fashioned wooden chairs ranged round the room afforded us an accommodation we little anticipated. The family consisted of the commandant, his eldest son, his wife, and four or five children, all extremely dirty in their dress and persons. All the female part of the family were employed in making paper segars for sale: behind the door of the sitting room was a chamber utensil of silver. There was neither window nor opening into either room, except the door, which was always open in the day time. The commandant offered me a segar, and assured me there was no reason to fear meeting with the monteneros, as they (400 in number) were at Ennudio, and so locked in by the troops of Belgrano and Cisneros, that it was quite impossible for them to infest the main road. There was (he said) no chance of our obtaining horses until the next morning, as this was only an auxiliary military

post, and the horses were kept at an estancia, a league off, there being no food for horses near the town; the water in all the rivulets was saline, the pasture is also flavoured with salt, from the soil, here strongly impregnated with muriate of soda, and continues more or less so to the foot of the Cordilleras. The inhabitants of Roccas are therefore obliged to dig wells to procure fresh water, which is found at the depth of about 50 feet. We took leave of the commandant, and joined our party at a house in the middle of a garden, into which the coach was dragged, there being no other place where we could sleep.

The village contains very few houses, and these are small and low; each habitation consists of two huts placed side by side, having each a single room; the gardens are very irregular in shape, and the whole has a wretched appearance.

Thére is a church here built with mud-bricks; it is a mean building; on a level, in this respect, with the huts. It was a grand feast-day (Good Friday), and the bell was tolling for mass. It happened that the clergyman, in his way to the church, fell into conversation with us, which being interesting to him, he said to the people who had assembled outside the church, some on horseback and some on foot, all dressed in their gayest attire, "*no hay misa hoy*," meaning he would not say mass this afternoon, putting the key of the church, which he held in his hand, into his pocket. The people immediately retired. We continued our conversation, which related to England, its laws, and the manners of the people,

respecting which he was very inquisitive, and made many shrewd remarks. He was in look and manner far above the common run of village curates, and seemed much respected, and probably not a little feared also by the ignorant gauchos.

Returning to our quarters, I sent for a sheep, which cost two reals (1*s.*); eight eggs, one real; bread, four reals, including stock for our journey; boy half a real for fetching it; wood, half a real; boy half a real for fetching it. The sheep was soon cooked, and we made a hasty meal. The garden was stocked with fig, peach, and almond trees; in another enclosure maize had been grown. The oven was in one corner of the garden; and as this necessary appendage to the most opulent in this part of the world, is always made in the same form, and generally of the same materials, the description of this will serve for all. It was built of sun-dried bricks; the base was a mass about four feet square, built up to the height of three feet above the ground; on this was raised a cupola-formed top of the same materials. Near the top of the dome was a small hole for the escape of the smoke; and in one of the sides a small hole for removing the ashes; and in the front a larger hole, by which the bread is put in and taken out. All the holes being opened, a fire is lighted on the oven-floor, which is kept up briskly by a constant supply of sticks and brushwood, until the requisite degree of heat is obtained. The ashes are then removed, and the top hole closed with a sheep-skin, or a brick, or both. The loaves, which are always of a small size, are pushed into the oven, and the hole

is closed with a sheep-skin. When sufficiently baked, the loaves are drawn out upon a rude sort of peel, or flat wooden shovel. Yeast is not used—the flour is therefore kneaded with leaven.

My intention was to have proceeded hence to Pergamino, and thence by a route parallel to the main road, through India Muerto to La Esquina, but the commandant of Roccas strongly dissuaded me from taking that course. He said that it would be impossible to obtain horses, and that we should be compelled to return. The best course, he said, was through Mercedes to Melinque, thence to Zanjon and Frayle Muerto; or by the Punto del Sauce and Rio Quarto. The latter he recommended as the best of the two. Unwilling to run any chance of being delayed, I resolved to follow his advice, and determined to take horses to the Cabeza del Tigre.

In the evening the postmaster, as he was called, came to me to bargain for horses. He said he was not a regular postmaster, and that he would not furnish me with horses at the usual post charges, which for six leagues (the distance to the lake of Cabeza del Tigre) would have been five dollars and a half, but he demanded seven; and as there was no alternative, I was obliged to comply with his demand. No trade of any sort is carried on at Roccas, and, small as are the wants of the people, it is difficult to conceive how they contrive to exist.

I saw here a plough of the country; it is very simple in its construction. On account of the scarcity of trees, it is difficult to obtain wood for these rude implements, but few are therefore seen. The only iron used about them is a plate called the reja,

which forms the ploughing point. There is neither share, coulter, nor mould-board. The plough consists of two pieces; the body and the handle are in one solid piece, curved like a letter L; the beam is a straight pole, wedged to it. The operation of ploughing consists merely in scratching up the surface of the ground into close shallow furrows, by which the earth is disintegrated. The handle is held by the ploughman in order to guide the implement, and to regulate the depth of the furrow. The plough is drawn by two oxen, the beam being attached to the yoke. When a tree can be procured sufficiently large, the plough and the handle are both formed of the same piece; but in most cases they are formed of two pieces.

April 10.—We rose at day-break, expecting to see the horses which had been promised, but they had not arrived. We breakfasted on bread and milk—a quantity measuring about a pint was sold for a real (6*d.*) With the horses came a supply of beef; it was brought on horseback by a boy, the pieces being laid across his saddle, and he riding astride upon the beef—a sight not very agreeable to an Englishman; but our nicer feelings were by this time considerably blunted. We purchased a supply of bread and beef for the journey, and the peons were also furnished with a quantity, which they placed between the saddle-cloths under the saddle. This is the usual mode all over the country; it must have been half-cooked after a hard day's ride. Bread for them was quite out of the question, as they seldom, if ever, tasted any.

When an ox is killed in the country, the flesh is

cut off in long slips, and the bones are left with the offal, to be eaten by birds of prey, to rot upon the ground, or to be used as fuel for the oven.

The postmaster demanded four reals for the use of each pack-saddle, and eight reals for the postilions, thus making his whole charge eight dollars four reals. The regular charge would have been no more than five dollars six reals. We however had no choice, and were therefore obliged to submit. The thermometer was 55°.

We left Roccas at eight o'clock, going WNW; saw great numbers of wild deer. At ten we crossed an extensive saline swamp, filled with rushes and tall reeds; in passing it we were attacked by multitudes of mosquitos, or gnats, of a very large size; they tormented us exceedingly. At half-past eleven we came in sight of the Lago del Tigre, and at twelve reached the post-house. This post consists of three small huts, horribly filthy; the people were extremely miserable in their appearance, and little, if any, better than savages in their mode of life. The postmaster, whose face and hands were coated with dirt, was a sly, roguish-looking fellow, far advanced in years, yet very strong and active. They had a well fifty feet deep, from which they drew most excellent water, in a hide-bag tied to a lasso, or hide-rope. The water in the lake is always rather brackish, but in spring it is strongly saline. Here again we were obliged to submit to imposition. The charge for ten horses, including two postilions, should have been six dollars five reals, but the postmaster would have ten dollars four reals, which we paid him.

I had just before given him and his wife a tolerable supply of tobacco, which pleased them much; but this did not in the least abate their desire to impose upon us. They were totally destitute of tobacco, and had not the least scrap of paper for making segars. I supplied both; and although they would willingly have gone a whole day or more without food to have obtained these luxuries, my generosity was doubtless an additional stimulus to their exaction. I did not then sufficiently understand the disposition of these people. With them is exemplified what will universally be met with over South America, that to confer a favour is to purchase an enemy. They are governed by no moral feelings, but will submit to a haughty, overbearing tyranny, no matter by whom practised.

We started again at one o'clock; our road led through several cañadas and bogs. There was a succession, for a considerable distance, of reedy swamps; the higher parts of them were covered with a saline efflorescence. The grass was also strongly saline.

The character of the soil was changed entirely; the rich pasture land was no longer to be seen; the grass was long and coarse, growing to the height of six feet, and much resembling rye or wild oats. It grew in clumps, the roots forming small mounds at every yard or two. The road was only a mule tract, so that the wheels of the coach rebounded from clump to clump, and made the travelling in it extremely fatiguing. We were obliged to proceed cautiously and slowly. At half-past one we crossed a rivulet, the water of which was saline. It was about

thirty feet broad, but not more than two feet deep. When the coach had nearly reached the opposite bank, the horses sunk in the mud, and finding no hold for their feet, plunged violently. With much trouble, and by the aid of two more horses, we at length extricated the coach from the mire. The current of the river was towards the south; it empties itself into the lake of Cabeza del Tigre, which we had just before passed. The grass was now very reedy, and very salt to the taste. The thermometer had risen to 78°, the wind W, and we experienced a slight shower. It was the first rain we had seen since we left Buenos Ayres. At four we passed another saline swamp, which had an offensive putrid smell: there was a considerable quantity of salt efflouresced, which had the taste of common salt and saltpetre. We soon came to a swamp, which took us a quarter of an hour to cross. At five we reached the post of Mercedes.

During this day we saw several foxes, but no other animal whatever. The journey was dreary and wearisome, being over bad roads, and through swamps, without the sight of a single habitation, except the huts at the Cabeza del Tigre. The ground was so level as to present no object, and was, in all respects, calculated to cause depression. We learned that this kind of inhospitable land extends some hundreds of leagues to the southward. Since we left Buenos Ayres, we had not seen a single tree, nor even a bush, growing naturally.

Immediately on our arrival at Mercedes, I inquired for the postmaster, hoping to be able to proceed on to Melinque; I was the more desirous to get to

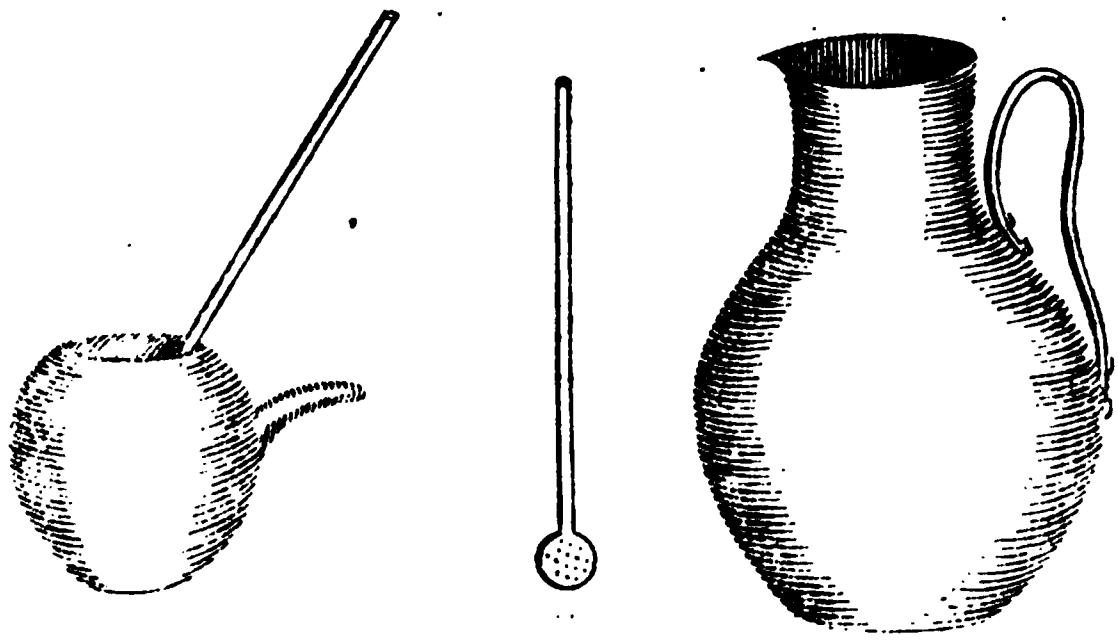
Melinque this evening, as the stage beyond it was very long, and I wished to obtain a night's rest before commencing it. The man told me it was impossible to procure horses until the next morning. Seeing me anxious to proceed, he told me he had no horses, he had nothing but mares; I discovered this to be a falsehood, and taxed him with it; but he, not at all abashed, said his mother was gone to Pergamino, that the horses were hers, and that without her permission he could not let us have them. It was also necessary for him to go with us to bring back the horses, and he could not leave the house till his mother returned, which he assured me would be by day-light next morning; finding it impossible to obtain the horses, I was obliged to make up my mind to remain. The reason of his saying he had no horses, but mares only, was this; no one will ride a mare; it is considered disgraceful; they are kept solely for breeding, and for some few purposes about the estancia; they are of so little value as frequently to be slaughtered for fuel.

There was here but one small miserable mud hut; in it I counted eighteen persons, and yet part of the family was from home. The whole of my party, except myself and my wife, were obliged to sleep in the open air, exposed to the heavy chilling dews: this was felt to be a hardship by those unaccustomed to it, and ill provided for it as they were. It was well that we brought bread and beef with us, as nothing could be purchased here. The kitchen, or cooking apparatus, consisted of three short poles, forming a triangle, upon which, to the windward, a large hide was extended to keep off the wind; here we boiled

and roasted our meat, and ate our dinner. There was a covered cart, on which our men kept their eyes, intending to sleep in it, but in this they were disappointed; it was occupied by part of the family. Six of them slept on the bare canes, which formed the bottom; and five more of them slept upon hides on the ground, under the cart: none of them had any softer bed than a hide, nor any other covering than a single poncho. Children are thus bred from their infancy to endure the cold night air, and the heavy penetrating dews which fall in this country. The remainder of the family slept inside the hut. Hearing that there was another hut at the distance of a mile I went thither, and found two most miserable hovels, but no horses; we had therefore no remedy, but were obliged to make the best of our situation.

Sunday, April 11.—Awakening just before the dawn of day, a curious and picturesque scene presented itself. Part of the family had risen, and having lighted a fire under the triangle, as many as could edge in were huddled round it; some were seated on small blocks of wood; others on their heels, with their knees in their faces; the blazing fire cast a strong light, which, contrasted with the deep shade of the back ground, displayed the whole group, their rude dresses and strange postures; the effect was singular and remarkable. They were in earnest conversation respecting us; and the matesito was handing round from one to another, each in his turn taking a sup through the long tin tube of the infusion of yerba, out of the little calabash, or matesito. The whole scene and circumstances of the time led me almost to imagine

that we were bivouacking among the Indians, or among some of the savage outcasts of society. I got up and joined the party, all of whom bustled to make room for me. A fresh matesito was made for me, without a word being said respecting it. An old man threw out the leaves they were using, and pulled from under the hide on which he sat a small kid's skin, with the feet and tail tied into knots, so as to form a bag; in this he kept his store of yerba. He took out a small handful of the yerba, put it into the calabash, which is here represented, drawn one-fifth of its size, and filled it up with boiling



Mate, Bombillo, and Caldero.

water from a copper pot, which forms an essential part of the household goods of every gaucho. Then putting in the bombillo, or tin tube (they are generally of silver), he stirred it round, took a sip himself to ascertain its goodness, and then presented it to me, touching his hat at the moment I received it. I have been a little particular in this narration, as descriptive of a habit which, without variation in the preparation, utensils, or modes observed, will be found, among high and low, universal in these

parts of South America. These people never hesitate to receive into their mouths the tube which but an instant before was in the mouth of another. In the most polished society, the same tube will pass round in the same manner from one to another; I gave them a supply of yerba and sugar in return for their kindness. The postmaster put me off from time to time, telling me his mother would surely arrive; he expected her every moment: hour after hour passed, but no mother came; noon arrived, and still no mother; my patience would hold no longer; I charged him with deceit, and insisted on having horses, but it was all to no purpose: he took it very coolly, and hinted that, as his mother had not arrived, she might be absent till the next morning; after much expostulation, he promised to provide horses at six o'clock in the evening, if his mother did not arrive before that time; I was obliged to submit.

I could discover no regular employment that any of the people here followed; true it is this was Sunday; but from all I could see, and all I could learn, there was no sort of regular employment; I could not make out from them how they contrived to live. During by far the greatest part of the day the women were basking in the sun, and conferring on each other the mutual favour (for it is their great delight) of picking the vermin from their hair. They were shamefully dirty. Their dress (and the dress of all the women in the country is much the same) consisted of a dark blue coarse baize petticoat of native manufacture, and a sort of shift made of white cotton, which is seldom or never off their backs

until it rots off; dirt and grease had made them the colour of the ground on which they reposed. All the women were affable and respectful. One there was much better looking than the others, cleaner in her person, and the only one employed: she was washing; she had been delivered of a remarkably fine girl three days before; and although she looked pale she seemed in good health, and was evidently very strong; none of the others gave her any assistance. The men were equally unemployed, strolling or lying about, hardly desiring to move, having no sort of amusement: one, however, was employed; he was seated on a log near the door of the hut, and played nearly all the day, and all the evening, some wild notes on an old guitar, occasionally singing through his nose a melancholy barbarous Saracenic air. Two boys were sent out on horses in search of quiriquinchos, or armadillos; they brought home two, which among them are called mulitas. Water was procured from a well about twenty feet deep; two stakes were placed upright, one on each side of the well, and a cross piece going over the mouth was fastened to the uprights with strips of hide; a sort of bucket made of hide was fastened to a lasso, and being let down, a man or woman drew up the water by pulling the lasso over the cross piece. Near the hut was a small plot of ground, without enclosure, which they called a garden; there was not a tree of any sort in it; nothing indeed but a few herbs; it appeared as if it had been cultivated with wheat; but the people had no bread. They had a small store of wheat in a sack made of a hide. The price of

wheat in this remote part of the country is very high. Five dollars, a fanega (about three and a half English bushels). In order to get it ground, it must be carried to Pergamino, or Salta; very little bread was used by them; none had been made for a great length of time. I examined some of the wheat, and found it hard and heavy, although the grains were small. A sheep here was worth a dollar, and every article of food equally dear, beef alone excepted; this all over the country is the principal sustenance. No idea of religion, at least no sign of devotion, appeared among them; they called themselves Catholics, and were, as most barbarians are, very superstitious.

The Fortin de Mercedes lies about a league to the SW. It is one of the old military defences against the Indians: since the revolution, the fort has been neglected, and has fallen to decay. A small guard is still kept there. A few years since this fort, it is said, was remarkable for a lofty tower built of unburnt bricks, from whose summit the Indians could be discovered at a great distance; the tower no longer exists.

The moment the sun was set, the postmaster came to me, and said, he was ready to start whenever I pleased. The story of his mother was, I have no doubt, a fabrication; the delay was occasioned by some superstitious notion which I could not discover. It was Easter Sunday, and probably it arose from some circumstance connected therewith. The men and boys soon collected a large troop of horses; our quota was saddled, and an additional number provided for relays, the distance to Melinqué being ten leagues;

his charge was thirteen dollars. We left Mercedes at seven o'clock, heartily tired of our delay, and well pleased to get once more on our long and wearisome journey; the fatigue of travelling was infinitely more agreeable than the passing of our time in such places, and among such people, as we were now leaving. The country was of the same kind with that we passed two days before, and the coach proceeded slowly; at half past eight we reached a long cañada, or reedy swamp, through which the coach dragged very heavily, and it was with considerable difficulty the horses could draw it through the bog. The night was favourable, the moon being at the full, and very brilliant. The swamp was nearly a mile long, and the water about two feet deep; at eleven we had to cross another swamp nearly as long as the former; in these places the gnats swarmed in incredible numbers, and annoyed us exceedingly. On the horizon, in the direction in which we were proceeding, was a large brilliant fire, which had a most awful appearance, being reflected from the sky upon a large lake in the front of us. The effect was heightened by the cloudless sky, the brightness of the moon, and the vast and dreary expanse which surrounded us. The scene was solemn; and as we slowly approached the lake, absorbed in reflection, our silence was all at once disturbed by a salutation of English voices; we could, however, see nobody; but our horsemen rode towards the spot whence the voices proceeded, where they found two Englishmen rising from the ground on which they had been sleeping; their bed was the earth, the saddle, pillows, and their ponchos their only covering. The

approach of the coach had awakened them; and they hailed us, suspecting who we were, having heard of our being on the road as they came along; they were also on their route to Chile, and had come during the day from Pergamino, intending to reach Melinque this night; but having lost their peon, who had the care of their baggage, and had lagged behind, they resolved to await his coming. They had heard at Pergamino that the high road was not safe, and had therefore struck off into the pampas. After a short parley they promised to join us at day-break at Melinque. At half-past six, just as the day was dawning, we reached Melinque, having been eleven hours coming ten leagues. This village consists of about twenty-five miserable mud huts, placed without order. It lies about a mile from the NE edge of a lake of the same name; the lake at this time of the year is much reduced in size; but after being swelled by the rains in the winter season, it extends twenty miles from E to W, and half that distance from N to S. There are an immense number of these lakes, some much larger than that of Melinque; they extend all over this part of the pampas country, and when full are connected together in all directions.

Most of the huts had a garden, and in some of them were peach trees: these were a cheering sight to us who had been wandering over a dreary solitary waste; the water of the lake, the foliage of the trees, the fences of the gardens, and the various tints of the sky, produced many pleasing sensations, and excited no small degree of exhilaration. It was nothing at the moment that the inhabitants were

almost destitute of all human comforts; that they were filthy, ignorant, and debased, as much as human beings could well be; it was nothing that the place was truly wretched, the trees few, and the gardens neglected—it was a change from the immense solitude we had travelled over; and was refreshing and invigorating to us all.

We drew up before a hut, the inhabitants of which were just rising from the ground. Our first salutation here, as at every place where we stopped, was enquiries respecting the Montenero: hearing we had steered clear of them they expressed great surprise. They were in hourly expectation of a visit from them, having only two days before been visited by a party of eight of these marauders who had taken away their best horses, some cattle, and whatever other provisions they could find. We learned that two other of our English friends, who a fortnight before had left this place for Lastunas, were obliged to return to Melinque, and there await the arrival of a party of carts, with which for greater security they passed to the northward, towards Zanjon. I intended to have directed my course northerly from Melinque, so as to fall into the high road at La Guardia de la Esquina. The people here strongly urged me not to attempt it on account of the deserted condition of the post-houses and the consequent difficulty we should find of procuring post-horses. I was, however, very desirous to get into the main road, and still more anxious on account of my wife, who had suffered extremely from the state of the country through which we had passed, and in her advanced condition could hardly continue

to travel over such ground without the greatest danger. I was willing to encounter any difficulties; and we were both of opinion that the danger was hardly greater the one way than the other. On the arrival of our English friends before-mentioned, we were able to determine the best course. One of them was an old traveller between Buenos Ayres and Chile: and he, although travelling on horseback, had resolved not to get into the high road, where he was satisfied horses could not be obtained. The road which I proposed to follow through Zanjon, a miserable place, was seventy leagues in length, the whole being one uninterrupted swampy pampa, with not a single intervening hut: he had himself once accomplished this stage by the most extraordinary exertions, but he said he would never attempt it again, and that it would be quite impossible for me to travel it with the coach. He advised me strongly to proceed by the road to Lastunas: our guides no less forcibly urged me to that course, assuring me that in two days they would engage to reach the post road at Barranquitos. The owner of the hut we stopped at had no horses. There was only one man in the village who had a troop of horses large enough for us; for as the post at Lastunas was thirty leagues without a village, a post-house, or even a hut in the whole distance, it was necessary to take a number sufficient to effect relays during this tedious stage. We went to this man, who was at first out of all bounds in his demands; he asked seventy dollars, when the regular charge would have been only twenty-eight dollars. The man was aware we had no alternative, but he lowered his demand to

forty-six dollars, which I was forced to give him, he promising to let us have sixty spare horses for removes, besides our regular number: our friends also engaged horses for themselves and their baggage. We therefore paid the man, according to the usual custom, as soon as the bargain was concluded, he promising that no time should be lost in getting the horses ready. Much time was, however, consumed by these dilatory people, so that it was half past one before we started: the thermometer at this time stood at 82° in the shade, the day felt particularly hot and sultry.

We had been an hour on the road, expecting every moment to see the spare horses arrive, when, apprehensive of some trick, our friend Mr. B. galloped back, met them and brought them up; but instead of sixty spare horses, the number engaged by both of us, there were only thirty-five, and these very sorry beasts. We began to regret that we had not remained until we saw the horses, but we were somewhat reconciled to the course we had taken by the reflection that we might have been detained another day or two, and been no better served at last. The road was in all respects similar to that we had travelled during the last two days. At four o'clock we saw before us at a distance a large troop of horses feeding, and not far from them something like an encampment. This was a novel sight, and to some of our companions somewhat alarming: speculation was soon at work as to whom and what the people were; it was decided that they could not be the Montenero, whom we had been every where told we should surely meet; they seemed t

their manner, and too careless: our horsemen therefore galloped up to them, when they found Mr. B——, who had gone on before us without our knowledge, bargaining with the people for figs. It turned out to be a troop of mules from Mendoza, the owners of whom, afraid to come by the high road, had chosen that by Lastunas; they had taken up their quarters for the night; their loads were wine and figs destined to Buenos Ayres. The wine was in barrels, made at Mendoza, they were rude and clumsy, and in order to strengthen them their ends were covered with pieces of raw hide drawn very tight over them by strong thongs of hide passing alternately from one to another, after the manner in which a drum is laced; the hide is put on while wet, and as it dries it shrinks, and thus makes the cask very secure: the barrels held about sixteen gallons each, and two were a mule's load.

The figs were packed in hide bags sewed up close. We afterwards met several of these troops; but as this was the first I had seen it engaged much of my attention, and I will therefore describe the mode of encamping: there were about forty mule loads, each load was placed upon the ground about three feet apart, and the pack-saddle of the mule was placed upon each load; the goods thus placed formed a circle of about fifty feet diameter: the muleteers were lighting a fire in the centre to cook their meal; the mules being turned loose to graze, they all kept together, or rather roamed within the sound of the bell hanging to the neck of the madrina, or mare which leads the troop. The saddle, and several coarse cloths, with a sheepskin died blue, extended

upon the bare ground, forms the bed of the muleteer, who lying on it in his clothes, and covering himself with his poncho, sleeps in the open air after the habit of every gaucho, landowner and farmer in these provinces.

Having purchased some figs we resolved to halt until the moon arose, and then to resume our journey, travelling all night. We endeavoured to obtain a little sleep, but the gnats buzzed around us in such incredible numbers, and stung us so severely, that it was quite impossible to obtain any repose, and as the moon rose at seven, we started soon afterwards. The road led through swampy land: many of these swamps were extensive, and in wading them we were dreadfully annoyed by the mosquitos, their hum, as it indicated torture, was extremely disagreeable, and their sting was terrible; no adequate conception can be formed of their number, the air being filled with them almost like a dense cloud. At ten we fixed upon a dry level as a place of rest, hoping to obtain some sleep, but the mosquitos, as if greedy of blood, followed us: in vain were the coach windows closed and every hole and fissure stopped—in vain were our faces covered, they entered through the crevices in every direction and stung us sorely; thick leather gloves were but a poor defence, their stings penetrated them with ease; sleep was denied us; we were all of us in a state of the utmost torment, and desirous of proceding so as to escape, if possible, from so horrible a situation. The horses were collected, and at half past eleven we were again on our course. I should have preferred going on without stopping, but it seemed necessary to give

those who rode on horseback as well as the horses, some rest, but no one could endure the terrible persecution of the mosquitos. At five in the morning we again halted; the ground we had passed over was all of it more or less swampy: we selected the highest spot we could find, this was, however, even now at the close of the dry season, very damp. Here we rested two hours; sleep was out of the question; our tormenters, notwithstanding our weariness, forbad us to hope for any solace of that nature; these bitter enemies crowded round us incessantly: no one, indeed, can form the most distant conception of the horrid punishment we endured. Half the stage only was now accomplished, but tired as our people were, so long as any one could sit upon his horse and his horse could move his legs, he, like the rest, was anxious to move forward.

At seven we set off again, in dreadful torment, worn out with fatigue and want of sleep. The thermometer at sun-rise was 64°. At eight, we forded a wide stream; and at nine entered on a large space, the tall grass of which had been recently consumed by fire: this was probably the fire we had seen two nights before.

At ten we were agreeably surprised by what must appear in the relation the merest trifle—a bush, about four feet high, growing by the side of a ditch. This was, however, the first shrub growing wild which we had seen since the commencement of our journey. We saw also several herds of deer and some stags.

At eleven we passed a waggon containing travellers from Ardova, who, from fear of the Montoneros,

had gone by a circuitous route to the sources of the Rio Quarto, along whose banks they had so far journeyed, and were now crossing the Pampas, on their way to Buenos Ayres. We passed three several troops of mules on the road to Buenos Ayres with wine and figs. Each of these troops consisted of thirty to forty laden mules, besides an equal number for removes. The muleteers ride in the rear of the troop, excepting one of them, who always leads the mare with the bell.

At two, the thermometer in the shade was 82°: we continued our course till six, when we arrived, almost jaded to death, at Lastunas.

This journey had been very wretched; we had all suffered much from the musquitos: our hands and faces, much swelled, were exceedingly painful; but my wife, in this respect, suffered the most. Her face was quite disfigured, so that she was scarcely to be recognized as the same person. The whole country around this place, with the exception of the shallow hollows filled with water, and forming lakes, was one level saline swamp covered with coarse grass. In no part of this long, wearisome, and distressing journey, from Melinque to Lastunas, did we see a single hut or inclosure, neither an ox nor a horse; scarcely any birds, and no quadrupeds, except the deer before mentioned: it presented one boundless solitude, disturbed only by the horrible buzzing of clouds of mosquitos. The soil, although saline, was a dark friable mould, without the smallest pebble in it. We had seen neither sand, clay, nor gravel, since our departure from Buenos Ayres.

Lastunas is a most miserable place; it consists of

eight or ten dirty mud hovels. But to us, any object indicating the haunt of man, however barbarous, was pleasing and consolatory. The place takes its name from the *cactus opuntia*, which grows wild in the neighbourhood, some of which we observed about a mile before we reached the place. Tuna is the name throughout all Spanish America for the broad-leaved cactus, called in English the prickly pear, from the fruit it bears, which has however but little resemblance to a pear.

The people here displayed still more of the Indian manners and character than we had hitherto seen. Their appearance was very wild, and their look ferocious. They are strongly addicted to the use of ardent spirits whenever they can procure them; take great delight in dancing, noise, and revelry; are remarkably thievish, and very filthy. Our fellow traveller, who had formerly passed through this place, put us on our guard against this propensity; but, worn out as we all were by the journey, and the oppressive heat of the day, his good advice was of but little service: we had hardly sufficient resolution left to make any arrangements to prevent being plundered, but were eager to obtain a resting place even in one of their wretched cabins. Without the least ceremony, therefore, we entered the hut, and my wife descrying a low bench, was happy to seat herself, when one of the women immediately came up to her, eyed her with much attention, but with good-natured satisfaction, and as a first salutation, snatched her gloves from off her hands, and hid them in her bosom, laughing at her own dexterity. There appeared much pleasant humour in the welcome they offered us, but it was necessary to be

incessantly on our guard against their continual attempts to steal something. They displayed great delight in playing the guitar, accompanying their rude moorish canzonets with their voices, singing verses partly extemporaneous. It is, as I have since found, the common practice all over Spanish America, for the people to catch hold of the name of their visitors, and of some circumstance connected with them, and mix them up with their songs, which are expressive of dancing, love, and tender sentiments.

While purchasing some beef at a neighbouring hut, a very civil man came up to me and offered to provide horses for the next stage, twelve leagues to Loboy. I agreed to hire his horses, but I had scarcely done this when another man came to offer me his horses. He was the juez or alcalde of the place; but having already engaged horses, I could not treat with him. This led to a serious quarrel between the parties, as to who had the right of making the first offer. I took care not to interfere in it, nor even to inquire how it ended. In the evening, the whole of the small population crowded about us to make merry, and the hut, both within and without, was soon a scene of tumultuous noise and hilarity.

There were in the hut, two hides stretched for beds; these they offered to me and my wife, but we renounced them in favour of our fellow travellers, partly on account of the vermin, and partly from fear of our property in the coach. We retired to our crampy bed at an early hour, leaving our companions, who, though fatigued, could not resist

participating in the enjoyment of the boisterous mirth of their hosts. It was with difficulty we could get to sleep amidst the excessive noise of the drunken revelry, singing, bawling, laughing, and dancing, which was kept up till midnight; after which all was hushed in quiet repose. At half past one I was suddenly roused by a most hideous noise; no Indian yell could have been more terrific. With the recollection of the night revels still crowding on my half-awakened senses, I was at a loss to conceive whence it originated; but, on opening the coach-window to inquire the cause, I learned that it had proceeded from the united howlings of twenty or thirty dogs, which, in different notes, sent forth the most discordant and terrific yells imaginable. All our party had jumped up from their sound sleep, and sallied forth, thinking the place was attacked by a party of wild Indians. It is a custom among the dogs in this country to hunt in concert. They seldom bark in the night, but if one commences, all follow the example, making the most dismal howl that can be imagined.

In every village, and at every hut, a great many dogs are kept. They are of a large breed, of a snarling habit, though by no means brave; they are easily cowed, and never attack a man in front; but have the provoking habit of biting the horses by the heels. The stories of wild dogs in the pampas, which burrow in holes, hunt in packs, and live upon cattle and wild animals, are fictitious.

April 14.—We rose early, in the hope that the horses would be ready by the time we had breakfasted; but, as usual, we were disappointed, in con-

sequence of the quarrel being renewed between the alcalde and the man of whom I had hired the horses. I held to my contract, and the alcalde was obliged to give up his claim, telling the man however that he should soon be made to repent of his temerity, as it should be quickly seen in whose hands the power was lodged.

These alcaldes (justices of the peace) are the most overbearing tyrannical brutes that can well be imagined. They are always the keepers of the Bodegon, or Pulperia, of the village, and no one is allowed to retail any article but themselves; they encourage every vice by which they can bring customers to their store, promote discord and every evil propensity by which gain may be made. Their influence is therefore great, and the means of annoyance they possess still greater. It was half past nine before we got again on our journey. The peon of our fellow travellers was left to follow with their baggage, as, in consequence of last night's drunken debauch, he could not be made to stir himself to get ready by the time we started. When he overtook us, inquiries were made, by one of our friends, for his boots and spurs, which, on account of a sprain in one of his ancles, the day before, he had left for him to bring on with him. The peon had forgotten them, and was sent back; but it was too late, the people of the hut had stolen them.

We met a drove of oxen passing on from the Puente del Sauce, for the purpose of supplying the miserable places we had passed through with beef. These were the only animals we saw during the whole journey from Lastunas to Loboy. There was

no sign of any human habitation the whole way, like that seen yesterday, the country was a vast swamp, having many lagoons in it; our friends had galloped forward to Loboy, for the purpose of getting horses ready for us to proceed on our journey in the afternoon, but owing to the laziness of our peons we did not reach Loboy till after five o'clock; we were thus nearly eight hours travelling thirty-six miles. I attempted to excite them to push forward, first by persuasion, and then by quarrelling with them, but the more I urged them, the more they delayed, stopping every now and then to change the horses, and to adjust their saddle equipage, which furnished continual excuses for delay. So many are the paraphernalia of a guacho saddle, and so liable to slacken, that much time is unavoidably lost in travelling even when there is no design to cause delay. To change a saddle from one horse to another takes about a quarter of an hour.

It appeared to me that they were resolved we should not advance beyond Loboy, and I was as fully resolved to proceed to the Puente del Sauce. On my arrival at Loboy, I repeated my determination firmly, and as the horses were all collected and brought to the corral in anticipation of our arrival; I ordered the post master to select the number required, with the view of taking some refreshment hastily, so as to proceed without delay—but not a single article of food could be procured, neither meat, bread, milk, fruit, nor any edible thing was to be had, neither was there any place in the vicinity from which any could be procured. Fortunately we had some dry musty bread, the remainder of the

last quantity purchased at Roccas, and one of our horsemen as he approached the village had picked up an armadillo, and this was all that could be mustered for nine hungry people. Mortified at the dilatoriness of the peons, and the absolute want of food, I walked again to the corral, and found one of the men only just beginning to saddle, at the same moment the principal peon came up, and peremptorily ordered the horse to be unsaddled, saying that he for one was resolved not to proceed till the next morning. He called his companions aside, and at his instance they all refused to proceed. They insisted that the road laid through an almost impassable pantano, a morass several leagues in extent, in which the wheels would sink to the naves in water, and altogether so uneven and miry that it could not be passed in the night; an appeal was made to the post master, who at once said there was no danger, but as if recollecting that our stay might be turned to his advantage, he suddenly retracted his words, and now prognosticated nothing but danger. Knowing, however, that other peons could be procured, I told them that unless they agreed to go on I would instantly discharge them all, and hire others. This caused them quickly to agree to our proceeding, requesting permission only that they might wait till the moon rose; and as it was now nearly dark I consented: they all laid down upon their saddles to sleep, and we made the best meal we could of bad bread, the armadillo, and tea. Our two new friends had waited here for us till four o'clock, when seeing no signs of our arrival they had set off, wishing to pass the morass by day-light.

Our young creole friend, however, preferred our company, and never left us.

Just before our arrival at Loboy, I saw a flock of swallows migrating; their flight was towards the NE. The thermometer was at 80° in the shade.

Loboy is a very miserable place, consisting of only four dirty mud huts; not a tree nor a shrub was visible, and even the long rushy grass was no longer to be seen, the country presented a picture of extreme desolation; the only exception to its dreariness was two peach trees which grew near one of the huts; the people were miserably poor, filthy and haughty. The horses grazed upon some land at a distance. The moon rose at nine o'clock, when I roused our party, who immediately commenced saddling their horses; by great perseverance we were able to leave Loboy at ten o'clock. I paid for ten horses to Puente del Sauce, a distance of eight leagues, thirteen dollars four rials, nearly double the ordinary charge. It was a most lovely night, the moon shone resplendently, and the air was cool and refreshing. At setting off, the ground was for some time firm and even; at eleven we reached the so much talked of pantana, the plain was a little damp in some places, but it had a hard level tosca bottom: at length we reached the morass, which was of no great extent, overgrown with rushes: we soon passed it; the water in it no where exceeded a foot in depth, instead of the four feet which we were told it presented for many leagues; the bottom was hard throughout, instead of the deep mud it was said we should find. Our two

friends, whom we overtook at Puente del Sauce, told us they had gone through some parts of the morass which a coach could not have passed, but by making a small circuit we had avoided these bad places, which were well known to our peons; they chose, however, to conceal the circumstance, and to represent to us the difficulties only of the worst parts of the morass. After passing the swamp, the ground for five or six miles was hard and even; it was, however, covered with a white efflorescence, which indicated that at certain seasons of the year these extensive plains are mostly under water. The country appeared very sterile: as we approached the Puenta del Sauce, we saw an estancia, with large inclosures, and abundance of horses; it was the only spot where pasture was visible. Here was an encampment of several troops of mules, with wine and fruit, from Mendoza, going to Buenos Ayres. We reached the Puenta del Sauce, at three o'clock in the morning, of the 15th of April; and found our friends sleeping in the open yard of the post house. At day-light the people came round us and offered my wife all the assistance they could afford; with milk, bread, and fruit; we observed that on all occasions they refused to give any thing into her hand until she had paid them for it. The same conduct produced by their suspicious disposition prevails all over the country.

These were to us actual luxuries, our journey across the pampas having separated us from all civilization, and all sorts of indulgencies. In the small villages, and solitary hovels, the people have barely the means of providing themselves with beef, which

with but few exceptions is their only food. Had we not taken in a supply of bread at Roccas, we should, during our five days journey over 220 miles of ground have been totally deprived of that hitherto esteemed necessary of life. Along the course of this wearisome journey the number of people is remarkably small; yet for hundreds of miles to the southward of our track there are scarcely any people at all, and immense tracts of country are not only destitute of quadrupeds, but even of birds.

We were happy in having arrived at Puenta del Sauce, as the worst part of our road on the plains was passed over, although we had still forty leagues to go before we should reach the high road. We consoled ourselves with the expectation that the difficulties, delays, and the extortion to which we had been obliged to submit, were nearly, if not quite ended. We were told that horses could now be procured at very short distances, and we persuaded ourselves that the remainder of the journey to Mendoza would be as rapid as we wished. I went to the commandant, for it is a guardia, to show my passport, and to have his signature annexed; he received me with much apparent kindness; his hut, although a miserable structure of sun-dried bricks, was clean and orderly within; it was situated in what they called the plaza, or square, a space overgrown with grass and weeds. On one side was the fort; it is a square inclosed with a mud wall, at each of the corners within the inclosure was a rude square mound, nearly as high as the wall; these were intended for platforms on which to mount cannon; this citadel could, however, boast of but

one brass three-pounder, no guard was mounted, and the fort was used as a coral for horses.

The pueblo, or village, consists of a few miserable huts, not ranged in order, as such places usually are, but straggling. We paid eight dollars for ten horses to Algarrovas, a distance of eight leagues, and two and a quarter dollars for a breakfast of meat, bread, fruit, &c. We left the Puento del Sauce at ten o'clock; half an hour brought us to the Rio Quarto; this small river was a novel sight, the stream appeared to have scarcely any perceptible motion, it was a narrow stream running in a channel above 100 feet wide, between perpendicular banks thirty feet high; it looked like a very broad but nearly empty canal; at the fording-place the banks had been sloped off, so as to permit access to the river's bed, but the angle of the inclined plane was not less than twenty-five degrees. As the steepness of the descent portended danger, we made the coach as light as we could, and endeavoured to persuade our peons to descend as gently as possible: this they, however, refused to do; they could not conceive the utility of the advice, as they had always been accustomed to drive down these steeps as rapidly as possible, in order to gain, as they supposed, a degree of velocity which helped them to ascend the opposite bank. Finding persuasion useless, we were constrained to allow them to follow the usual mode: the horses were, therefore, put to their speed, the coach flew down the bank and dashed across the river, the peons shouting a horrible yell to frighten the horses, to keep them to their pace, and force them up the opposite bank, the top of

which we reached in safety. The greatest depth of water was two feet and a half. This river takes its rise in the Cordovese range of mountains to the northward, receives numerous streamlets in its course; turns to the eastward, and crosses the main road near Saladillo, where it falls into the Tercero, one of the streams which forms the Rio de la Plata. At Puento del Sauce the soil changes to a light sand.

We had now entered the country in which it was said the deep ruts would shake any ordinary carriage to pieces. These ruts, and the badness of the roads, are constant themes of apprehension at Buenos Ayres; but the truth is they are by no means formidable; neither is it necessary to encounter the difficulties they occasion, for but a few yards on either side of the road the ground is firm and level. The ruts are broad, and will allow of any ordinary English carriage to run in them; and the caravan we brought with us from England would have been an excellent vehicle, had we not been persuaded by our friends at Buenos Ayres not to attempt the journey with it. Nothing would induce our peons to leave the beaten track; they had always travelled in the ruts, and would not therefore be persuaded to take to the level ground; the only reply to our arguments was, it runs easiest in the ruts. The country continued to improve in appearance; the coarse rushy grass was succeeded by a smooth, short, thick, herbage. Now and then we saw a few dwarfy shrubs, which grow three or four inches above the pasture: as we proceeded, we observed that they increased in height and size, until they reached to about four feet in height; they were principally ver-

benas and lyciums. We passed several estancias, and saw many herds of cattle. At noon we observed many fruit trees, in a large inclosure. The fig-trees, with their wide spreading branches and broad expanded foliage, afforded us a most reviving sight, producing sensations which can be felt only by those who have travelled over such a tedious dreary waste. Our course lay along the north bank of the river, which continued to flow in precisely the same deep bed we observed at the fording-place. At half-past one we arrived at the post-house of Algarrovas.

This place consisted of six or seven huts, as wretched as any we had yet seen. They were not built of sun-dried bricks, but merely of sticks, wattled and plastered with mud, and were in a sad state of dilapidation. Notwithstanding these appearances, there were some indications of improvement; the manners of the people were milder, and their appearance less ferocious. They brought, unasked for, milk and apples to my wife, and did not evince so much suspicion in their behaviour as the people to the eastward had done. There was also an improvement in the huts; instead of bullocks' heads, which all along the route we observed were used in lieu of stools and chairs, they had built up a bench along one side of the wall within, to serve as a seat, and this I observed was the custom in all the huts between this place and Mendoza. To the next post, at La Reduccion, distant eight leagues, the charge for horses was seven dollars and a half. Along this stage the country continued to improve; the earth was a mixture of fine mould and sand; the bushes increased as well in numbers as in size

and variety. Most of the brambles were a species of mimosa, and small chañars began to show themselves; the virbena prevailed, and smelled much like wild rosemary. As we approached La Reduccion the face of the country was further changed: instead of one unvarying interminable plain, the surface was formed into gently rising grounds. The road however became worse; we had to cross several broad deep gullies, made by water in the winter season, but now dry. Hawks were seen in numbers, and at intervals we observed small clumps of thorny trees; these appearances made us feel as if we had again reached the abode of civilized man.

I noticed during the day several viscachas; this animal is about the size of a rabbit, and, like it, burrows in the ground; its downy coat is of a grey colour; it seems to partake of the character of the cat and of the rabbit: it has whiskers and short ears, a long tail, short legs, and makes a grunting noise.

The appearance of the setting sun this evening struck me as remarkable; as it sunk towards the horizon, long blue rays shot upwards, diverging in all directions, as from its centre, and reaching an altitude of thirty degrees. It now grew dark, and the road became worse. From the manner in which the body of the coach was hung, the severe jerks, which occurred continually, exceedingly distressed my wife, and made us long for our arrival at the next post, which we reached at seven o'clock. The thermometer at two p.m. was 64°.

La Reduccion is a large place compared with others we had seen, there appearing to be about fifty or sixty houses. We stopped at the house of

the commandant; it was the largest we had seen for a long time, built with sun-dried bricks, and thatched as usual. It had never been white-washed: like others, it had no light but what entered by the door-way, and was extremely dirty. The commandant was a stout, hale man, about sixty years of age; he seemed to have been brought up in the place; he held the rank of teniento (lieutenant) in the militia of the province. He was extremely ignorant. His family was large, consisting of several grown up sons and daughters, some of whom had children also. The sons were as ignorant as the old man, they were dressed in ponchos, and were no better in appearance than ordinary gauchos. They were all, both men and women, extremely civil. One of the men went to show me the pulperia, kept by the alcailde, of whom he said I could purchase beef for our dinner. I found a number of men playing cards, and seven or eight women squatted round a chafing-dish of charcoal, taking matte. Having purchased a quantity of beef, for three rials, I returned to the commandant, whose slave cooked it for us. We stayed with these people the remainder of the evening, who were very desirous of making us as comfortable as their means permitted. My wife was so much indisposed by the severe jolting she had undergone, as to make her desire to repose herself, and she remained in the coach. I supped with the family, who had a table and some short benches. The meal consisted of several dishes, put upon the table by the female slave; one mess only was served at a time, in a deep silver dish called a palangana: it serves all purposes, whether of cook-

ing or washing, or any thing else. A dirty cloth was spread upon the table; but there was neither plate, fork, nor spoon. Each man pulled out his long knife from his girdle, and cut a piece off the meat and eat it with his fingers. We had hashed beef, roasted beef, charqui, or dried beef, stewed with onions and fat, and fried charqui. One of the sons said grace both before and after supper, the whole crossing themselves at the conclusion. I treated them in return with a bottle of brandy, a liquor which none of them had ever tasted; they liked it very much. To the old man I gave a stock of tobacco and paper to make segars; and to his old wife a quantity of yerba and sugar: all these articles were extremely scarce and dear here. The family were delighted, and I was well pleased with the attention they paid to us.

There being no post-master in the village, I agreed with the alcailde for horses.

Our two English friends left us here, as we travelled too slowly for them, and pushed on towards Mendoza.

April 16.—We rose early, and treated the commandant and his wife to a breakfast of tea. They had never before tasted tea, and were much pleased with it. If it be possible for a half-bred gaucho to have any feeling of kindness beyond the moment, they will never forget our being at La Reduccion. We were ready to start at eight o'clock, but the Buenos Ayres officer and one of my men had lagged behind the preceding afternoon, and had not arrived; they came in at nine o'clock. It now appeared that they had missed the track, night coming on they could not find it again,

and had therefore been obliged to sleep on the bare ground with their horses' bridles twisted round their arms. Ever since dawn of day they had been wandering in seach of us, unable to find the track, when fortunately a gaucho met them, and directed them to the village. We paid nine dollars for the next six leagues, to San Bernardo, and started at half-past nine. The road continued along the northern bank of the Rio Quarto. The soil was more sandy, and the ruts were deep, yet notwithstanding my wife had suffered so severely the day before, all our efforts were ineffectual, the peons would not keep on the smooth level ground, by the side of the beaten track. At one place the coach was suddenly checked against a bank between the ruts, which was higher than the axle-tree of the fore-wheel. It took us some time and trouble to extricate it; still our peons would not be persuaded to keep on the level ground. By command and persuasion I got them two or three times on the level ground, but in an instant they were in the ruts again. We saw immense numbers of catitas, a beautiful species of green parrots not much larger than a thrush; they have white heads and blue wings, are easily domesticated and soon learn to talk: they burrow in the steep banks of the river. The face of the country, undulated, forms low hills and broad valleys; luxuriant bushes grow out from the perpendicular banks of the river, which, seen in its various windings, is very beautiful. The thermometer at ten o'clock was 76°, without a breath of wind, or a cloud above the horizon; the weather was very sultry. The appearance of the country improved continually; the hills we saw were

higher, and in the valleys were many beautiful shrubs and small trees, but no timber: the largest of the trees was only fit for fire-wood. At half-past twelve we again forded the Rio Quarto, and soon afterwards observed a lofty range of hills in the distance. We reached San Bernardo before two o'clock. Here the condition of the people appeared to be considerably improved. I was struck with the cleanliness and neatness of the post-house. The postmaster was from home, but two females in the house were particularly kind and attentive to my wife. One of them was weaving a poncho in a rude loom; the other was spinning; they were both married, and had children. They presented my wife with milk, figs, apples, and zandias. One of them, as an act of civility, pulled off the skin of several figs with her long nails, and offered them in her fingers, recommending them to be eaten with some cheese of their own making, which had been placed upon a clean table.

The family were all clean and neat in their persons; the house, though small, was orderly; on each side of the sitting room was a raised bench, built with sun-dried bricks, and at each end of the room was a table. One addition to the house struck me particularly, as it was the first time I had seen a window since I left Buenos Ayres. It had twisted wooden bars, but no glass; all these things indicated increase of comfort and happiness among the people, and demanded and received our respect. These small matters have great effect upon a traveller who has journeyed over a long and dismal wild of several hundred miles, offering no variety, and in-

habited only by a few barbarians. The benches were covered with carpeting, some small pieces of which were also laid on the earthy floor, close to the benches. The table was covered with a clean cloth; the fruit was placed in common white earthenware plates, the first we had seen during our journey. Every thing was clean, neat, and comfortable; and though it forcibly brought to my recollection a better sort of English cottage, it created happy sensations, which would not have been excited in such a cottage at home, where these things are common.

We examined their ponchos, one of which, with a blue ground and coloured figures, was very beautiful. The prices were from ten to fifty dollars; I should have purchased one, but the drains upon my purse had been so much heavier than I expected, that I feared it would hardly hold out till our arrival at Mendoza; and there were no means of replenishing it until we reached that place. In the yard some men were making charqui; it is thus prepared:—the fleshy parts of the ox or cow are cut into long slips about four inches broad, and a third of an inch thick, and hung on sticks in the sun and air; it soon dries, and in this state will keep a long time. The method of cooking it is generally by stewing it in fat, with onions; but on a journey it is roasted before a fire; and, to prepare it for cooking, it is beaten with a piece of wood, or between two stones. When about half dried in the sun, and then roasted, it makes a most excellent steak, being very tender and full of gravy. It was procured here in this state, and our travellers made a hearty repast. The zandias (water-melons) are very refreshing during the

heat of the day, and we always purchased some whenever they could be procured. Here they were very fine.

I paid four dollars and a half for ten horses to the next stage of Rio Quarto, distant five leagues.

We quitted San Bernardo at half-past two; the road was over several low hills. Soon after three we entered a wood, which consisted almost wholly of thorny trees, all stunted and low. They were the mimosa, the chañar, and the algaroba. A rude wooden cross by the road-side denoted the place where a man had been murdered. The country became more hilly in the distance, and the trees were larger.

Wood thickened on the right of our road, and the population appeared more numerous; we passed several peasants. The general character of the people differed from that of the inhabitants of the pampas; they were shorter in stature, cleaner, and better looking. At five o'clock we again entered a wood, principally of chañar trees, but thicker set than in the wood we had lately passed; it took us an hour to go through it. We saw several herds of goats. Before seven o'clock we reached the post-house of the Rio Quarto, which is a single low hut and very miserable. The people were very poor. The postmaster was laid up (for it could not be said that he was in bed), in consequence of a hurt he had received some days before from a horse, and his wife was in the most deplorable distress. Our friend, the doctor, did him what service he could, prepared him some medicine from our chest, and gave his wife directions what to do. Their thankfulness amounted almost to adoration

of him. The only thing she had was a small pot of butter; this she pulled from among the thatch of the hut, and gave it to my wife; it was the first butter we had seen since leaving Buenos Ayres. They could not supply us with food; we therefore sent to the village of Rio Quarto, half a league distant, when we obtained a plentiful supply of bread and meat.

April 17.—We rose as usual at day-break. Just as we were about to set off, four females on horseback rode up; they were dressed in their Sunday's best, consisting of gowns of coloured cotton, white cotton stockings, black shoes, coarse black beaver slouched hats, and common baize shawls thrown over their shoulders; they were seated on sillons, or saddles of the country, the construction of which will be understood from the annexed sketch.

The two sides are raised nearly a foot high, a strip of hide goes across the back which serves as a support to the rider, whose feet rest on a small foot-board, and who thus sits in a kind of chair; this mode of sitting is however insecure, unless the horse be quiet and regular in his paces. Riding is one of the principal entertainments of the better order of females on holidays. The bottom and sides of the sillon are covered with dressed sheepskin, and stuffed with wool. These females accosted us with great familiarity; they took much notice of my wife, turning her round and pulling her about with

much good humour, and examining her dress from top to toe. They invited us to go with them to the village, and expressed their disappointment at our not having been there the evening before to a tertulio, a sort of entertainment common to the country.

We paid four dollars for ten horses to go the next stage, a distance of six leagues; and left the post-house of Rio Quarto before eight o'clock. We were now gradually approaching a hilly range which appeared to be covered with brushwood and low trees: the soil was in many parts coated with a saline efflorescence; the wind blew strongly from the WNW., and the air gave us a sensation of considerable cold, although the thermometer was 68°. The road, in consequence of the sandiness of the soil, was heavy, and our progress slow. At half past eight we stopped in the main road, being told we were at Cabral. The post-house was about a quarter of a mile off; the horses were taken away and others brought, but having been informed that the road was heavier and more uneven than that we had passed, I was induced to hire two additional horses and another peon, making six for the coach and six for saddle and baggage. The distance being ten leagues, we were charged eleven dollars two rials. We were told there were only two small huts at Cabral. We were off again at half past eleven. The country was hilly and broken into quebrades (ravines). At twelve we reached a rivulet, the Aguarillo, and stopped in the bed of the river to change horses: the bed was broad, but at this season of the year there was but little water in it, and that little ran as a mere

brook; the level of the bed of the river was forty feet below the surface of the land. The soil here was a loose micaceous sand, which in many parts was covered with a saline efflorescence, having an alkaline taste. The horses brought to us were very wild, and could with difficulty be managed; when once off they ran with all the speed they could, and as the road was very hilly and the wind high, the sand flew in clouds before us: we were rapidly approaching a distant hilly range which appeared to extend to the NE.; it is the terminating point of the Cordovese chain of mountains. At two the thermometer stood at 78°; at four we passed along the steep banks of a river now almost dry. When we arrived within sight of Barranquitos our coach was stopped by the ruts, the axletree of the fore carriage resting on the bank between them. We got out and walked on foot to the post-house of Barranquitos, and entered it at ten minutes after five.

About two miles to the eastward of Barranquitos I picked out of the sand a small fragment of quartz, about half the size of a hazel nut. This was the first pebble or stone of any sort I had seen since I left Buenos Ayes.

We had now reached the regular post road, our long wished-for and anxiously expected object. Our hopes of better accommodation were not disappointed. The first glimpse of the place had to us somewhat the appearance of a village alehouse in England; every thing bore the semblance of cleanliness and neatness; the habitations were the largest and the loftiest we had seen since we quitted Buenos Ayres, and the situation was picturesque. There were two

ranges of buildings opposite one another, eighty feet long; in the middle between them was a lofty tree with wide spreading branches and full foliage, under which the coach drew up. The vicinity of the mountain range, the hills, the surrounding green foliage, the size of the buildings, rendered the situation exceedingly pleasing to our eyes. At a short distance was a capacious corral for the horses, and near to it a pond. The postmaster, who had heard of us from our friends who had gone forward, came with several females to welcome our arrival; he was a tall, stout, good-looking man, whose mien bespoke no ordinary degree of self-importance; every word and gesture indicated him to be a man of authority: his wife, an affable woman, on the contrary, exhibited much gentleness of manner. They had nine children living there, seven of whom were girls. The principal room, being that which they occupied, was between thirty and forty feet long and twenty wide, the height of the walls within being fifteen feet. A space was parted off at each end of the building, probably used as store-rooms; but, according to the custom of the country, the family slept upon the raised bank built round the large room with sun-dried bricks.

A fat sheep was killed, and while it was being cooked my wife and I took tea: this was our constant practice at the end of the day's journey, and its effects in restoring us after great fatigue were no less remarkable than constant: this, with bread or biscuit and figs, was nearly all the nourishment we took, seldom tasting meat during the whole journey. My meal was, therefore, generally ended before that of

our fellow travellers commenced, whom I usually joined for company's sake. It was seldom in less than three, and sometimes four hours after our arrival that dinner could be provided. The condition of my wife after a long day's journeying made a light meal of an exhilarating nature very desirable, and this, by means of our canteen, was always attainable in a few minutes.

In addition to the mutton which had been prepared for our fellow travellers, our hostess had kindly prepared a dish for us, of which we were sorry we could not partake. It was therefore put upon the table as common stock; the dinner consisted of boiled, roasted, and stewed mutton, with, for the first time since our departure from Buenos Ayres, plenty of potatoes. The whole was served up on silver dishes; neither plates, knives, nor forks, were offered, the custom of the country not having as yet made them necessaries. Every one eats with his own knife and his fingers. Each was, however, on this occasion, furnished by our host with a silver spoon. On the table was a clean cloth, and every one had a chair to sit on, and two or three persons were in constant attendance as servants; the enjoyment every one partook of can hardly be described, the change was so very sudden, and the extent of it so great, as to produce a very unusual share of happiness, which was pretty equally diffused among us all. We retired to our coach as usual, preferring it to the chance of fleas, and even more to the necessity of sleeping in the same room with others, on a hide, on the floor, or on the raised brick bench. In no part of the country can better accommodation be

given. During the night the wind was boisterously high from the northward, so much so, as to move the coach from its place and drive it a distance of ten yards. The falling of a branch from the tree broke one of the front panes of glass, an accident which proved the source of much discomfort to us during the remainder of the journey.

The postmaster is very rich, that is to say, he cannot be worth less than 40,000 dollars, which, in the province of Cordova, is a large sum. A chapel has lately been erected near the house, at the expense of the family, for the convenience of the surrounding peasantry, and with an eye, no doubt, to the better custom of the pulperia; the postmaster has endowed it, at a considerable cost, with silver plate, and all the necessary paraphernalia essential to the Catholic service; but the provincial of the diocese of Cordova, though he granted it for a short time, has since withdrawn the permission to have service performed here; and promises to withhold it until the postmaster bequeaths the chapel and all its endowments as gifts to the church of Cordova, upon the demise of the present possessors. The old lady, who most strenuously takes up the cudgels, insists upon maintaining her right of leaving it in hereditary succession to her family, or in default of issue, in testamentary bequest to whomsoever she pleases; the consequence follows, that as might overcomes right, the chapel will prove an useless expenditure, and a losing speculation to its founders.

It is the custom throughout South America, and more especially in these united provinces, for every haciendado to build upon some central part of his

estate a pulperia and a chapel close together; the latter as the means of drawing custom to the former, which forms no trifling branch of profit. On a feast day, the people within a certain distance repair to the pulperia, which is generally provided with two rooms, one for the mere gauchos, the other for their betters. Drinking and gaming is carried on without intermission until the bell announces that the elevation of the host is at hand; in an instant they all rush out of the pulperia, leaving the stakes, which are sometimes considerable, on the table, and with demure faces kneel before the host, the elevation of which is about to save their souls from damnation: they groan and cry aloud to the Virgin to protect them, and, in their momentary devotion, might be taken by a bye-stander for penitent and sincere Christians. But the moment the service is concluded, they rush out again; and those who have left their stakes undecided, flock back with precipitation to protect their property: in a moment all their religion is forgotten, all are occupied in betting and drunken revelry, in which the friar, who has been the organ in effecting the momentary penitence and sorrow, and has saved their souls from perdition, stands foremost in the general debauch, which is continued till late at night. On these occasions, the pulpero, or keeper of the pulperia, is generally the banker of the gaming tables, in virtue of which privilege he is sure to come off winner if he be ordinarily prudent; and the quantity of liquor drunk by the gauchos both inside and outside affords him a considerable profit.

It may be inferred that an eye to the future

profits of the pulperia has more influence on the conduct of the provincial, in the affair of the chapel of Barranquitos, than any other consideration: be this as it may, under any point of view, the affair is disgraceful, and shows the meanness and immorality of the ecclesiastical institutions of the country.

The postmaster, though a kind-hearted man, affectionate to his family, and affable to the surrounding peasantry, is a tyrant to his slaves, and forms one of the very few exceptions I have heard of to the universal custom of the Creoles, among whom slaves are treated with the same kindness and consideration as the rest of the family. When I slept at this post-house in 1819, I was awaked early in the morning by the shrieks of a black female slave, who was receiving a most unmerciful flogging from his hands; and when in 1825 I passed through this place, his mayordomo, a male slave, was so maimed from the injuries received from the floggings of his unmerciful master, that he was only able to walk about with the assistance of a crutch.

The post-house of Barranquitos is seated upon the banks of an estero, which, though nearly dry in summer, swells during the rainy season to a stream of considerable magnitude; the bed of the estero is about twenty yards wide, and its banks, which are perpendicular, are about thirty feet deep.

CHAPTER II.

BARRANQUITOS TO MENDOZA.

From Baranquitos, through San Luis de la Punta, by the post-road to Mendoza.—Tables of Posts. I. Buenos Ayres to Mendoza, by the Pampas. II. Buenos Ayres to Cordova. III. Buenos Ayres to Santa Fè.

We left Barranquitos on the 18th of April, at a quarter before eight a. m.; our course was SW, then S, till, at the distance of about four miles, we ascended a steep bank, and rounded the edge of a hill, when the country became more undulating and broken. Large blocks and veins of mica slate were frequently seen, these were the first mountain formations on the road from Buenos Ayres.

At the distance of two leagues from Barranquitos, we crossed a rivulet, which forms the boundary line between the provinces of Cordova and San Luis. Here we changed horses. Upon the margin of this rivulet is the farm-house of La Punilla, which belongs to a relative of the postmaster of Barranquitos. Attached to the residence is a chapel, a large garden, with an extensive orchard of fruit trees, and a plantation of poplars and willows. I was told, that the gooseberry flourished here: and that this was the only place in South America where it is found in perfection. There are a few bushes in some gardens of Buenos Ayres; which have never

yielded fruit in perfection. The estancia is extensive, and has an immense number of cattle upon it.

Our course was now SW, then WNW: when about a league beyond the Punilla, a man came galloping up to us, inquiring for the doctor, whom he begged to turn back to see his wife, who was very ill. Medical men are unknown in this country, and the news that one was at hand naturally excited the attention of those who stood in need of professional aid; so it happened all the rest of the way to Mendoza. The doctor's assistance was eagerly sought on many occasions. On approaching the post-house, the small ranges of mica slate became more distinct, dipping SE, at an inclination of forty-five degrees. Upon the margin of the second ridge is situated the post-house of Achiras, which is five leagues distant from Barranquitos.

This is a tolerably decent place. The appearance of a tall and widely-branched fig-tree in front affords a pleasant shade and a grateful appearance. The family residing here are people who consider themselves far above their stations, being of respectable Cordovese connexion. They are gifted with all the pride, haughtiness, insolence, and laziness of such as can boast a Spanish descent. The lady of the house sits in state, with her three grown-up daughters, upon the broad carpeted estrado, where, with great parade, they receive the passing traveller, and never fail to entertain him with an account of their grand connexions, and remarks on their great city of Cordova. Not one of them will move off her seat (upon which she sits cross-legged) to forward any refreshment the traveller may require: these duties are not befitting

such señoras, more especially as they keep three or four female slaves to attend upon them. A separate room is set apart for the traveller, who is only admitted into the sala por condescencia, for a gossip.

The presence of an English female, however, called forth more than an ordinary share of curiosity and civility. They brought some milk and apples for her. The latter were not grown on the spot, but were the produce of Mendoza.

The traveller's room is a dismal looking place, two opposite sides having raised mud benches, four feet wide and two feet high, which are never swept. On these the traveller may recline, if he wish to refresh himself during the usual delay of changing horses. The postmaster is no less above his duty, most disobliging and proud; so that, in respect of bad horses, want of postillions, and tardiness in dispatch, few houses on the road exceed it. This place is somewhat prettily situated in a little rocky recess, where formerly there was a good garden and orchard, enclosed by a stone wall; but it is now gone to decay: nothing is seen, excepting plenty of weeds, and a few quince and fig-trees. Nature has done much towards making this place a delightful residence; it is furnished with a never-failing spring, issuing from a vent in the rock; and, with a little industry and care, Achiras might become a beautiful little place. The coral for the horses is a square inclosure, its two sides being formed by the impending disjointed rocks, from between whose numerous crevices little trees overhang the retreat; the other sides are made of loosely piled fragments of stone. I paid

here five dollars five reals for the change of horses to the next stage of Portozuelas, distant five leagues.

We left Achiras at a quarter past eleven, our route at first winding in various directions, to avoid the numerous low hills, between which we passed; the country then appeared like a somewhat broken pampa, covered with long grass. At the distance of a league we crossed a low ridge of hills, and then travelled over an undulated grassy pampa, till we approached another similar ridge of hills. This ridge is of no great elevation, and its margin presents a gentle declivity, with a somewhat broken surface, out of which huge masses and interrupted strata of mica slate present themselves; at the foot lay gigantic blocks of the same formation, heaped confusedly together, amidst which we were unexpectedly surprised to learn that the post-house of Portozuelas was situated. On alighting from the coach, we walked in among the detached blocks of rock, when we discovered, hidden between them, two very rude miserable huts, several peach-trees, some large plants of cactus, tuna, and several bushes were seen growing around them, springing from between the crevices of rock, while a small spring, oozing from between some of the stones, supplied the inhabitants with water. The verdure and luxuriance of the foliage, contrasted with the bare weather-beaten masses of rock, the wretchedness of the huts, and the miserable appearance of the inhabitants of this beautifully sheltered spot, gave to the whole an air of the romantic. The scene altogether is of a most pleasing character, more especially to a traveller who

has passed over some hundred miles of country presenting nothing but a boundless plain devoid of any scenery, where neither hill, rock, nor tree could be seen. The only inhabitants are the postmaster, who is a perfect gaucho, his wife, and three dirty children. The huts are as dirty, filthy, and miserable as can be conceived. They have no doors, and are destitute of furniture and of every convenience and comfort. We obtained some whey, milk, and cheese, but no bread nor meat—none could be procured.

I paid here seven dollars seven reals for the hire of eleven horses to the next post-house at the Morro, distant seven leagues. Along the whole route between Barranquites and Mendoza we found eleven horses requisite, as it was now indispensable to have five horses to the coach on account of the heavier roads. We left Portozuela at five minutes before three, and proceeding some little distance to the southward, we ascended in a westerly course the extremity of this mountain range, over which the road leads all the way to the Morro: it appears like an undulating elevated table land, and is covered with tall grass, of which the ostrich is extremely fond. Here the traveller may be almost certain of meeting with numbers of this remarkable bird, which are occasionally seen along the high road. The ostriches of the Pampas generally appear in flocks, sometimes only in pairs; they are extremely shy, and will suffer no animal to approach them: like the African ostrich they cannot fly, but use their wings in running; their pace exceeds that of the fleetest horse. They are caught by the bolas, a

missile weapon peculiar to the Indians and inhabitants of the Pampas.

The bolas used for the catching of ostriches are of a smaller size than those which, as well as the lasso, are in these parts used for catching horses and cattle.

The lasso is a missile weapon used by every native of the United Provinces and Chile; it is a very strong plated thong, of equal thickness, half an inch in diameter, and forty feet long, made of many strips of green hide, plated like a whip-thong, and rendered supple by grease; it has at one end an iron ring, about an inch and a half in diameter, through which the thong is passed, and thus forms a running noose. The gaucho, or native peon, is generally mounted on horseback when he uses the lasso; one end of the thong is affixed to his saddle-girth, the remainder he coils carefully in his left hand, leaving about twelve feet belonging to the noose end in a coil and a half, which he holds in his right hand; he then swings this long noose horizontally round his head, the weight of the iron ring at the end of the noose assisting in giving to it, by a continued gyratory motion, a sufficient centrifugal force to project it the whole length of the line. When the rider finds himself within reach of his object, at a precise point of the rotation he lets go the coil, which flies off at a tangent by means of the centrifugal force it has acquired, and assumes a rectilinear motion, which, assisted by the turn of the hand at the moment of letting go, is thus projected towards the desired object, which it seldom or never fails to secure: if a horse, the noose invariably falls over the neck of the animal; if an

Method of throwing the Lafso

Method of throwing the Bolas

ox, over its horns. As soon as the rider perceives he has succeeded in his aim, he suddenly turns his horse, by which time the entrapped animal will have drawn tight the noose: the horse of the peon sets his legs, as if instinctively, in a position to resist the pull which the entangled animal, suddenly checked by the lasso, occasions. The dexterity of this operation, and the certainty with which an animal, running away at full speed, is caught at the distance of thirty feet, is admirable, and exceedingly curious.

The bolas is another missile weapon of a singular nature; it consists of three balls, each about two inches, or two inches and a half diameter, formed of a stone enwrapped tightly in a piece of raw hide, and affixed to the end of a thong about a yard long; the other ends of these three thongs are tied together. The gaucho always carries his bolas wrapped round his waist, while his lasso is always coiled up and tied to his saddle. The mode of throwing the bolas is very similar to that of the lasso; it is held in the right hand by the knot which ties together the three thongs; then twirling the balls round his head a number of times, and taking his aim, the gaucho lets go the weapon from the part of its orbit, which enables it to reach the object aimed at; and its centrifugal force is thus converted into a projectile force. In its course through the air the balls diverge, and describe a gyratory motion round their common centre; this weapon is generally aimed at the legs, and it seldom fails to entangle and check the strongest bull at full speed, and generally brings down any animal at which it is aimed.

Upon this route the ground was covered with

grass; occasionally was seen the pretty small crimson prostrate verbena, so common about San Luis. The distance from the post-house of Portezuela to that of the Morro is seven leagues. The ground became more undulating as we advanced, showing here and there patches of mica slate: we continued to approach the foot of a peak much loftier than any other part of the chain, probably 500 to 700 feet above its base; close to the southern point of which is situated the post-house of the Morro, where we arrived at seven o'clock after dusk. The post-house is a miserable hut, built of sun-dried bricks, having a small corridor in front. We did not feel disposed to enter a room once tolerably decent, but now covered with dirt, rubbish, and vermin, while better quarters were to be found in the open air. The postmaster was a very decent, well-dressed gaucho, having better manners than we had usually observed; but he seemed more disposed to amuse himself with gossiping with our peons than to afford us the refreshment we sought for.

The post-house is situated in the middle of a small village; it boasts of a chapel, dedicated to St. Joseph, and endowed with a bequest from a deceased haciendado in the neighbourhood, who, by this act of grace, procured for himself a more certain path to heaven. The endowment renders it obligatory on the holder of the little possession attached to it, to maintain without omission the performance of the usual ritual service, upon which occasions an extra mass is not forgotten in behalf of the soul of the bountiful departed.

April 19.—I rose before break of day this morn-

ing, and ordered the horses to be got ready with as much haste as possible, being desirous of accomlishing the two next stages, each of twelve leagues, during the day. Our guides at once pronounced this to be impossible, on account of the state of the roads; but as I had on former occasions found their reports to be untrue, I doubted in the present case, and was determined to use every effort to accomplish my purpose. When I left Buenos Ayres I was told that we should travel twenty-five leagues, or seventy-five miles each day, without any extraordinary exertion; but our progress had been retarded by numerous unforeseen impediments, owing, we were led to suppose, to our having travelled, for the most part, out of the usual line. We had been thirteen days travelling 186 leagues, averaging only fourteen leagues per day, instead of the twenty-five leagues we expected to have accomplished. Now that we had fairly entered upon the high post road, I was not disposed so easily to admit the excuses for delay which the peons were ever ready to urge on all occasions. I had two powerful motives for dispatch on the journey; the one was, the pregnant condition of my wife, and my anxiety to accomplish the passage of the Andes at the earliest possible period, so that the journey on horseback should not endanger her; the other was, the fear lest the season should become so far advanced that the Cordillera would be difficult to pass, on account of the snow. Every day's delay, therefore, rendered the occurrence of these impediments the more probable.

While the peons were preparing the horses, I walked down to the brook, which runs close by the

village; its sources are in the Morro: the quantity of water flowing through it was small. It ran in a deep bed, whose breadth was fifty feet; its banks were perpendicular, and twenty feet below the level of the adjacent country: here is, therefore, a section of the soil of the neighbourhood to this depth. It seems to be entirely alluvial, composed of fine sand and mica. Towards the bottom there is a stratum of hard black sand, several inches in thickness, and closely agglutinated; the bed of the rivulet, which was nearly dry, was formed of the detritus of mica slate and granite: this was mostly covered with a tolerably thick coating of efflorescent saline matter, having the taste of saltpetre; the same salt was also seen on the steep perpendicular sides, showing that the soil of this part of the country is strongly impregnated with saline matter.

The village of San Josè consists of about twenty huts, besides the large house of the proprietor of the estancia of San Josè. The small range of the Morro does not extend far to the northward, and seems to be an interrupted continuation of the Cordovese chain, from which it is separated by the travesia, or elevated puna, or table land, totally destitute of water: it produces a small quantity of pasture, and many small thorny trees and bushes. This travesia, as it extends northward, becomes more barren; the grass wholly disappears; nothing grows on its arid sandy soil but thorny trees, resinous bushes, and saline barilla plants. This sterile puna land, or travesia, possessing rather an undulating surface, extends many hundreds of leagues to the northward, to the province of Rioja, which

is almost wholly covered with this kind of desert surface. It extends widely over the provinces of Santiago del Estero, and Tucuman, constituting, with the exception of four or five very narrow vallies, the whole surface of the country between the Cordovese chain of mountains, branching from Potosi, and the more secondary chain of mountains about Jujuy from the former chain, and terminating in the Paramillo ridge to the westward of Mendoza.

The village of San Josè is considered a remarkably healthy situation. It is cooller than any other spot in these latitudes, on account of a strong wind constantly blowing in the Morro: this is always uncomfortable to the traveller, who takes up his quarters at San Josè, where it every night blows hard, frequently accompanied by rain, while a few miles off there is fine clear weather.

The charge of posting to the next stage of the Rio Quinto, a distance of twelve leagues, was thirteen dollars and a quarter. Notwithstanding my utmost exertions, we could not get away from the Morro till twenty minutes past eight: we at first steered our course SW over hilly ground. At the distance of a mile, we came to a few huts, scattered among some large masses of rock, from among which spring small pools of fresh water: we here found the miserable inhabitants employed in making *aropè*, a syrup formed by boiling down to a thick consistence the juices of wild berries. They had been preparing *arope de chanar*, from the fruit of that tree, and *arope de piquillin*, from the red ber-

ries of lycium bushes, which grow abundantly in the neighbourhood.

We now passed through a thickly wooded band of algarroba, mimosa, chañar, tala, and other thorny trees; the chañars are here very diminutive, frequently no larger than bushes: the woody band continued for about a league, when we began to leave the hilly margin of the Morro range, and once more entered upon a plain level pampa. This was covered with short coarse grass ,presenting here and there a few dwarfish chañar trees. On the horizon, towards the northward, we could plainly distinguish two isolated mountains; those of Las Carolinas and Solasta.

The road over the grassy plain is marked by numerous ruts, close to each other, formed by the wheels of the Mendoza carts: the horses crossed from one rut into another; this is the constant practice of the peons, and notwithstanding all I could urge to the contrary, they continued to do so. At the distance of about sixteen miles from the Morro, the wood again thickened, and here we again saw numerous cacti. We soon passed the wood, and again entered the grassy plain, our course being toward the SW; as we approached the margin of the river Quinto, the soil appeared less grassy, more saline and sandy. We passed through a wide bushy tract of very low mimosas, atamisques, lyciums, verbenas, &c. At a quarter past two we reached the banks of the river, which is a very small stream, though its bed is very broad. The river flows much below the level of the surrounding country, but its banks differed from any we had yet seen, by presenting sloping sides of

gentle ascent: we forded the rivulet, and at the distance of about two hundred yards from the opposite bank, we reached the post-house of the Rio Quinto. The better half of the day had now passed, and we had only accomplished one half of the distance I had contemplated. So much time would now be consumed in collecting the horses, which we were told were at some distance, that no hope remained of starting before four o'clock; and then by the time it became dark we should not have accomplished more than a quarter of our long stage; there was no resting-place in the intermediate desert, and it was requisite either to remain here, or to travel slowly during great part of the night: this latter course would have caused greater fatigue than our horsemen could well have endured; and I therefore, much against my inclination, resolved to pass the night at this post-house. I was mortified to think, that, instead of accelerating our progress, since we arrived upon the post-road, we moved with less speed than we had previously done over the unfrequented pampa country which we had traversed.

The post-house of the Rio Quinto is the residence of the owner of a cattle estancia: it consists of three very rudely built huts; the owners are very disobliging old people, remarkable for little else than their extreme pride, laziness, and poverty. We obtained here a lamb, some bread and some milk, upon which we made a good dinner; but on my return through this place last year, no meal or other fare was to be procured, excepting half a stale roll, which was divided between four starving travellers. The soil of this neighbourhood is sandy and gra-

velly; the upper surface consists of detritus of mica slate and granite, but beneath this deposition is a deep bed of reddish agglutinated sand, stratified in distinct horizontal laminæ, whose depth I could trace for fifteen feet. The variation of the magnetic needle was about 16° east.

April 20.—Rose very early with the desire of starting in good time, and managed with great difficulty to get away at a quarter before seven: we quickly ascended a steep hill, and reached a more elevated table height. Our coach was very nearly overturned by the careless driving of our guides, who, not choosing to avoid a deep hole in the road, drove the wheels straight through it; which caused a tremendous jolt. The ascent during this stage, although very gradual, was perceptible; the first part of the road is well wooded, principally with algarrobas and chañars: the remainder of the route was over an undulating pampa country, and was covered with long grass: in some parts of the road the soil was extremely sandy and heavy for our horses; in other places, many pools of standing water were seen, which, during the rainy season, expand over a considerable space, soften the earth, and form pontanas or quagmires, which are almost impassable.

The morning, in consequence of a strong wind, was cooler than usual; at eight o'clock the thermometer stood no higher than 62°. At the distance of about ten leagues from the Rio Quinto we passed over a low ridge of hills, which ran nearly in a northerly and southerly direction; the road continued to be sandy and saline: we then passed over a flat sandy country

covered with low bushes, principally of verbena and barilla plants, and at length descended to the small river of San Luis, whose bed is thirty feet below the level of the country, and whose banks are quite perpendicular; the bed of this stream is of considerable breadth, and consequently nearly dry, though in the rainy season: it is wholly covered to such a depth as to render it impassable. This rivulet runs into a wide valley covered with trees and bushes, in the midst of which is situated the town of San Luis de la Punta. We reached the outskirts of the town at a quarter before two, and here a strange obstacle presented itself: the principal, and only good carriage entrance was barricadoed by a row of stakes sunk in the ground, and others tied horizontally across them by hide thongs; the guard was not suffered to remove them without an order from the governor, to whom I therefore despatched my head guide with a polite message, begging permission to enter the town: while our messenger was gone I learned that the stoppage was a precaution (certainly an absurd one, while so many other places of entrance were open) to prevent a sudden surprise from the Montonero, the partisans of Carrera, some of whose roving bands had presumed to show themselves around the town. After waiting nearly an hour, our guide returned with the intelligence that the governor had just retired to his siesta, from which he would not awake till five o'clock, and on no account would he suffer himself to be disturbed. There remained, therefore, only two courses to pursue: to await several hours outside the town, exposed to the heat of a broiling sun, or to attempt

an entrance through one of the many side lanes, the passage of which was attended with danger, on account of the steep banks and ditches necessary to be crossed. The latter alternative was adopted. My wife, but little able to walk alone, remained in the coach while we pursued the journey on foot: the road was worse than I anticipated. The coach, which narrowly escaped an overthrow, reached at length the interior of the town. We passed through many streets, which more properly should be called lanes: most of them had raised banks on each side, four to six feet above the carriage-way, having high mud walls raised upon them which are overhung with weeds and creepers, and serve as enclosures to the gardens that surround most of the habitations. At length we reached the post-house where it was requisite to make some stay to repair the coach.

We had been looking forward with much anxiety to our arrival at San Luis, having discovered that one of the iron bolts which carried the whole weight of the coach body had given way. The engineer who accompanied me, had secured it in the best way he could, but without a forge it was impossible to remedy the evil. We had travelled 630 miles from Buenos Ayres, through several towns and villages, without finding a single blacksmith. This circumstance will show the backward state of the people, their few wants, and the total absence of the most ordinary and essential handicraft employment throughout this wide range of territory. The coach body being removed, we discovered another broken bolt. I proceeded with

them to the only blacksmith in this large town, and requested him to weld them that afternoon if possible.

The coach was drawn up in the square yard, or patio, fronting the post-house. Two sides of this yard were formed by mud walls; on one side was the room destined for the use of passengers, while fronting the street was the house of the postmaster, before which was a short corridor. The place assigned to us was a room without a window, about fourteen feet square, having at each end a broad mud bench, or estrado, three feet high. The mud walls had once been white-washed, but were now black with dirt. Travellers appear to have amused themselves in scratching their names in large characters on the walls, to record the fact of their passing this way. This hole was filthy and dirty beyond description: I therefore ordered the coach to be put together, that my wife might find a more comfortable retreat, and while this was going forward I took her into the postmaster's room, which, though dark and miserable, was spacious and lofty. Here she was received by the daughters of the postmaster, three grown-up girls, the eldest apparently twenty-five years of age, of good appearance, though her cheeks were unmercifully bedaubed with rouge. They soon became intolerably familiar, pulled her clothes about to examine how they were made, embracing her, and using as much freedom as if they had met with one of their old acquaintances. My return from the blacksmith was welcomed, that I might free her from her too inquisitive, filthy, and annoying companions. I went many times in the

course of the day to the blacksmith; it was of little avail; the fellow could not be roused from his afternoon's enjoyments, which consisted of smoking cigars with two wretched-looking women, all squatted upon the bare ground of their apartment, alternately playing the guitar, accompanying it with the usual Saracenic minor canzonets, which they bawl forth with nasal discordance. This, indeed, with due intervals of sleep, forms the usual mode of passing away their time. No inducement could urge him to work that night, but he promised to accomplish the job before daylight in the morning. To avoid fleas, or worse vermin, we slept, as usual, in the coach.

April 21.—I arose very early this morning, and proceeded to the blacksmith's. I kept knocking at the door an hour before I could gain admittance. At half-past seven it was opened by a boy; on entering I found the man, the two women, and several children all snoring at full length on the bare ground, without beds, lying in their clothes, which they never remove till they are worn off their backs, each being covered merely by a coarse woollen poncho. In this filthy hole were also dogs, pigs, and poultry; in one corner of the room was the forge; the charcoal lying on the ground, over which it was spread, and into which much had been trodden, leaving no small quantity on the faces, arms, and clothes of all the inhabitants. I roused the blacksmith, who, after sufficient yawning and stretching, squatted himself upon the ground, and ordered the boy to light the fire. Nothing could urge him out of his apparent laziness: it was yet impossible to stir his limbs, for I found the fire was not kin-

dled to heat the iron, but to boil his little copper water-vessel; his mattesito was made, and after quietly sipping three of them, he rose to his work. The forge was built of mud, the bellows were round and rude enough, charcoal was his only fuel, a lump of iron tied to a stick served for his hammer, and a lump of bronze metal tied to a wooden stake driven into the ground for his anvil: these with two or three worn-out files, a few pounds of rod-iron, and some horse-shoes, constituted his whole stock in trade and implements. The only iron work in use among these people is that requisite for horse equipage; and it is wonderful how, with such rude materials, they turn out the neat and good bridle-bits, rings, and other nic-nacks used among the gauchos. The smith, after long niggling, succeeded at length in welding the bolts each five-eights of an inch diameter; it would have been far above the extent of his art to forge such bolts, or even could he have forged them, to screw and tap them: his charge was two dollars and a half (10*s*.) I did not grumble so much at this as at his laziness. Among the inmates of the blacksmith's shop, I forgot to enumerate a young lion which had been caught in the neighbourhood of the Morro: it was quite tame, played with the children, the dogs, and the pigs; it was no larger than a big dog, not having yet attained its full growth. I have since seen this species of the lion of its full size: it has no mane, is of a light brown colour, has a smooth skin, and a good-natured countenance, possessing none of that ferocity which belongs to other species of the lion. It more resembles a gigantic cat in its shape, its

playful gestures, the form of its head, and its timidity. It is easily hunted by men on horseback, scared by dogs, and entangled by the bolas and lasso.

After looking to the repair of the coach, I proceeded to the governor's, a Frenchman, named Dupuis, to present my passport: he received me very politely; we conversed in his own language, which pleased him much: he was very inquisitive as to the object of my visit to Chile, which I did not scruple to tell him. Among other questions, he pressed some which appeared to me particularly strange, for I had not yet become sufficiently acquainted with the habits of these people: he wished to know if I had any choice fire-arms, good watches, or silk goods to dispose of. I was not as yet informed that throughout South America all men in authority are petty traders. General Marco, who commanded the Spanish forces at the battle of Chacabuco, and was there made prisoner, was then confined here, as well as that most excellent patriot Don Manuel Sarratea, of Buenos Ayres, who had rendered important services to his country, and had become obnoxious to the Puyreddon party. The public square bore the most shabby appearance imaginable; two very meanly constructed churches, the miserable cabildo or town house, the prison, and a convent, all built of mud, and going to decay, were the principal buildings. In the square were several prisoners in heavy fetters, making adobes, or sun-dried bricks; a number of ill-looking ragged soldiers, with loaded muskets and pointed bayonets, stood over them, but all were talking and joking to-

gether, and incessantly smoking cigars. The fort was not far of; it was a square raised inclosure of tolerable size, built of mud and adóbes, ill constructed, and shabby in appearance; it was furnished with several pieces of cannon. The town is rectangularly divided into quadras, of 120 varas square. Most of the houses have large gardens, enclosed by lofty walls of rammed earth, and are furnished with abundance of fruit-trees. I observed many cypress and poplar trees. None of the houses are white-washed, and consequently present a most miserable and paltry appearance. The town covers a large space, but the number of its inhabitants is small, not exceeding, I believe, 3000 or 4000. The water brought by the small river before mentioned is distributed by little gutters through each quadra. The gardens do not produce much, the people seem to have no great inclination for horticulture. They do not produce corn even for their own consumption, the people subsisting chiefly upon beef. Manufactures of no description are known.

The wealth of the province consists wholly in the estancias, or cattle-farms, where a number of black cattle, horses, mules, and sheep, are reared upon the scanty food which the province affords. Very little grass is produced upon the soil of San Luis, for want of rain, and they have therefore to subsist, in great measure, upon the leaves of the shrubs and brushwood which is spread over the country. The cattle in consequence are extremely lean. The animals for the supply of the town are sent to the richer pastures of Mendoza to fatten. The revenues of the farmers are derived from the sale of their animals,

which are sought after by the farmers of Mendoza, San Juan, and Chile. The farms in this province are not capable of producing sufficient wheat for the support of the miserable and scanty population of San Luis; the land will only grow corn where it can be artificially irrigated, for there are neither rivers nor springs to be found, and it scarcely ever rains: this country, therefore, is incapable of maintaining any considerable population.

The climate is very healthy.

On my return from Mendoza to Buenos Ayres last year, I was detained here half a day to accommodate one of my fellow-travellers, who had business to transact, which afforded me time to put up and arrange the many plants and seeds I had collected, and to make those notes which it was impossible to register during my former rapid progress. During this stay, which was on a Sunday, there was a general thanksgiving, a *misa de gracias*, for the news of the brilliant victory of Ayacucho, which had been announced a few days before. We arrived at the post-house just before the postmaster returned from church, and I was astonished to observe the old fellow, whom I had not seen for six years before, enter the patio where we were all assembled, dressed in a respectable suit of black, a decent beaver hat, and a gold-headed cane, with black tassel, the insignia of his office, he was now alcailde of the town. With a firm stately step, bowing as he passed, he moved on to his apartment, and calling in an authoritative tone to his slave, shortly returned back to the patio, assuming the most ludicrous airs of state. I am the more disposed to describe this cha-

racter as we see in him an admirable picture of a puntano; he was now dressed in his usual manner, in a shabby ragged pair of blue pantaloons, a tattered short brown jacket, with his shirt sleeves peeping out of both elbows, and an old shivered beaver hat that had lost its crown; round his waist was girded a tremendously long sword, having a silver hilt and a silver mounted scabbard; the slow movement of his gait, his upright unbending figure, the authoritative tone of command assumed towards all around him, the self-conscious dignity of this amusing personage was the most ludicrous specimen of unintentioned burlesque I ever witnessed; but this sally was still more ridiculous when I learned that he was not about to direct his attention to any function of his office, but to superintend his peons in collecting the horses destined for our journey. He called for his lasso, mounted his rosinante, and rode off, followed by two peons; they all returned in an hour's time with a large troop of horses.

The puntanos (as the people of this place are called) are great gamblers, and very immoral; the women, more especially those who are married, are very lascivious; they wait not for invitations, but themselves openly become the wooers: of this I saw several instances during my stay, and the accounts of numerous persons all agree in this particular. The postmaster's daughters were like the other ladies of San Luis.

San Luis is one of the meanest towns of equal rank in South America. There is hardly a decent looking house in the whole place, and every thing about it bespeaks the utmost poverty. It is in-

habited by an ignorant, intolerant, superstitious and conceited people, who persuade themselves they are superior to all mankind.

The province of San Luis is the least populous of all the provinces of La Plata, and the most insignificant in a political point of view. It was formerly subject to Buenos Ayres, but during the time Gen. San Martin ruled in Mendoza, San Luis was subject to his authority, and was governed by a Frenchman, who was perfectly subservient to those in power for the time being in all respects. This governor was a sanguinary wretch, always ready to execute any orders, or to obey any hints given him by government. Many were the persons who in the unhappiest time of the revolution fell under the suspicion, or were viewed with jealousy by the government; these persons were sent under escort to San Luis, as to a place of security, from whence but too many of them never returned. Two or three years ago this intendency raised itself into a province, independant of Buenos Ayres or Mendoza, and has since followed the example of the other provinces in acceding to a federal union, and sending deputies to the general congress or central government of the united provinces of the Rio de la Plata.

This town has been elevated to the rank of the city of San Luis de la Punta. The neighbourhood of San Luis presents a far more varied, extensive, and beautiful flora than is found in many of the other provinces. Among the trees are the algarroba, the chañar, several mimosas, the quebracho, an evergreen, with rhomboidal mucronate leaves, and many other trees quite novel to me, which were

neither in flower nor seed; among them I saw a pretty shrub which I have since recognised in the gardens at Buenos Ayres, where it is known by the name of barba de chibato, goat's beard, from the long pending stamina of the numerous bunches of handsome yellow decandrous flowers it bears; here is also the crimson zinnia, the pretty little prostrate verbena, and the commelina, which are found all the way from Buenos Ayres. I observed also two yellow œnotheras, and the mollissima, common in Buenos Ayres and in Chile. Here likewise are found great varieties of tillandrias, and other parasitic plants, better known in the houses of Buenos Ayres, under the name of air plants, which, without any earth about their roots, but merely tied to the iron grating of windows and balconies, will continue alive and flower for many successive years.

The cactus tuna abounds in the neighbourhood of San Luis, upon which the cochineal insect is found in abundance. It is collected, made into cakes, and sold in the pulperias for purposes of dyeing among the poor people; it might form an article of trade with the puntanos, did they possess sufficient industry to pay attention to its collection.

On my return to the post-house, from my visit to the governor's, I found that my men had refitted the coach, and that all the requisite preparations were made for our departure. A Chileno officer had just arrived, being on his road to Buenos Ayres; he had crossed the Andes, and had reached Mendoza only a few days before. The accounts he gave of the passes of the Cordillera were extremely satisfactory. They were quite clear of snow, and likely

to remain so, as he assured us, for a month at least; he had come over with two corps of artillery soldiers, which he had left in Mendoza. He gave me a more particular description of the nature of the road over the Cordillera than any I had hitherto heard. The horses were brought out. The postmaster assured me that the road on the next stage was very boggy and heavy, and that we should require six horses for the coach; he stated that no horses were now to be found at the next stage, the Reprisa, or the Laguna de la Chorillos; it would therefore be necessary, he said, that he should send sufficient relays for the following very long stage to the Desaguadero, the total distance from San Luis being twenty leagues. We had arrived at that point of our route, where the charge for saddle-horses and pack-horses, according to the established regulations, were doubled all the rest of the way to Mendosa; hitherto the legal rate of charge is half a real, or threepence, per league for each horse, but from San Luis to Mendoza it is one real, or sixpence, per league. For the coach horses there was no variation in the price, the charge continuing the same, one real per league for each horse all the way from Buenos Ayres to Mendoza. I therefore paid for horses to the Desaguadero, a distance of twenty leagues, viz. six for the coach, and six for the saddle,—thirty dollars. For two postillions, each half a real, or threepence, per league. The charge for our accommodation at the post-house was one dollar for meals, for milk two reals, twelve eggs, bought for the journey, a real and a half (ninepence), and a singular charge of three reals, or eighteen pence, for boiling them

hard for the journey. I bought also six reals worth of bread for the road. We left San Luis at half-past one o'clock, and soon entered a woody district, which presents many novelties to the botanist. The road to the Represa, a distance of seven leagues, lies through a beautifully wooded country; the road was bad, being in parts very sandy, in others boggy; on several occasions the bed of the fore-axle of our coach struck forcibly against some clumps of trees, which had been carelessly felled in making the road. For the first five leagues our course was generally SW; thence to the Represa it continued WSW; nothing worthy of notice was seen on the road, and we reached the farm house of La Represa at ten minutes before five in the afternoon. At this place is a small miserable cottage, and a pulperia newly built of sun-dried bricks; they were tolerably neat in appearance when I first passed through this place in 1819, but on my return in 1825 they were almost in ruins; the soil here is so extremely saline, that the mud bricks, by exposure to the air, are in a constant state of efflorescence, and quickly crumble to pieces. The place now presents a very miserable and wretched appearance—there are two other unfinished wooden huts used for the preparation of charqui.

The climate is here sufficiently dry to admit of making charqui without salting it: it is prepared by separating the fleshy parts of the bullock into thin strips, hanging them upon lines exposed to the heat of the sun, which quickly dries them: meat thus prepared and kept from damp will remain sweet for many years: it is always, however, deficient in

flavor, tough, and stringy; the best mode of preparing it is by reducing it almost to a state of powder by pounding; then by boiling or stewing with vegetables it becomes a palatable dish in places where no better food is procurable. Strips of beef exposed a day or two to the operation of sun-drying, and then boiled, make a tolerable beef-steak, which may often be procured upon the road when the gauchos are preparing charqui. Near the post-house are several very large corals, or enclosures, made of stakes set in the ground, into which the cattle are from time to time driven, for the purpose of counting, parting, selling, or killing.

The post-house is kept by a gaucho, named Sevala Blas. He was brought up among the Indians, and from his local knowledge of the southern pampas, and his intimate acquaintance with the different tribes of Indians, was placed by Dupuis in the provincial militia, as a captain, in which service he proved of great utility to San Luis by preventing warlike incursions into this district. Of him I made many inquiries as to the habits of the Pampa Indians, and of the country to the southward. The Indians of the Pampas formerly subsisted entirely on the produce of the chase, and had no notion of tillage or culture. Of late years, their successful ravages upon the eastern provinces have supplied them with immense herds of horned cattle and horses; in consequence they are now comparatively at ease, not having to depend wholly for subsistence upon baguales, or wild horses, nor upon ostriches, deer, foxes, &c. &c., the capture of which was always attended with uncertainty and difficulty. Their set-

tlements have therefore become more stationary than usual, although from their habits they still continue to rove in search of plunder. They never remain long on one spot, although whenever they do settle they prefer the places where other bands have previously fixed their fleeting abodes. Hence, upon the borders of rivers more especially, there exists at intervals of twenty or thirty leagues, a succession of these tolderias, or Indian encampments. Their habitations consist merely of loose hides, fixed to three stakes, placed triangularly, much after the fashion of our gypsey tents at home.

The post-house is seated in the midst of a large cattle farm, where a fresh water lake has been made by an embankment; hence the name Represa. This is filled by the draining of the water from the upper levels during the five or six showers that fall in the course of the year; these, together with the assistance obtained from a small canal which conducts a portion of the surplus water from the river San Luis, during the rainy period, affords sufficient water for the supply of some few thousand cattle.

The fresh water pond has been recently filled from the unusual swelling of the great Bebedero lake, which lies a little to the southward, wherein the rivers of San Juan and Mendoza empty themselves. Owing to the unusual quantity of snow which fell last winter in the Cordillera, they swelled to an unusual degree. There is no exit from this lake, but much of the water goes off, either by evaporation, or underground drainage. The Bebedero has recently been increased by the addition of the waters of the still greater river Tunuyan, which this year

changed its course, having in former seasons flowed into the river Diamante. About eighty leagues to the SE of the Rebedero, opposite the point where those two rivers united, a large island existed, which was surrounded by a very broad and extensive swamp, filled with rushes, in which these rivers lost themselves. These swamps drain into other swamps and lakes, which, at diminished levels, appear at different intervals; but little of these great waters find an exit to the sea, being lost by evaporation in the sandy pampas and reachy swamps which cover so vast a surface of the Indian Pampa territory.

This account, to which I give much credit, is fatal to the hopes of the Mendozinos, who are flattering themselves that a water communication may be found between their province and the Atlantic; hopes, which have lately been raised by the report of a native, who was sent on an expedition to the southward, and who brought accounts that the Tunuyan opened a free communication with the Diamante, which was navigable to its junction with the Colorado, which flows in a deep stream as far as the Buenos Ayres settlements of Patagones, and near it debouches into the ocean.

I decidedly give preference to the account of my informant, not only because he seemed fully acquainted with the long geography of the Pampa territory, from local experience and traffic through every part, but because I conclude, from the nature of the rivers, that their termination must be such as is described.

The rivers which flow from the Cordilleras, proceed

only from the melting of the winter's snow, and bring down with them an amazing quantity of fine alluvial mud. In their long passage through the mountains, and for some distance after leaving them, the descent is so rapid that the great quantity of matter held in suspension cannot subside. The Tunuyan, for instance, even as far as Coro Corto, has as much mud in it as can be suspended in agitated water. This is the case with the water supplying Mendoza, which none of the people can drink without either filtering, or placing it for a long time in a state of quiescence: so surcharged is it that they are obliged every day or two to clean out their irrigating channels, which would otherwise be filled with fine sand. If we take into consideration the nature of the country to the southward, its long and almost imperceptible descent towards the ocean, the immense bulk of alluvial matter that must yearly be brought from the Cordillera, and which must somewhere deposit itself,—we cannot but conclude that the rivers which may once have flowed in deep and uninterrupted channels to the ocean, must, from such causes, have had their beds raised in progress of time to the level of the surrounding country: the continual shifting of their courses over level plains; the constant accumulation of muddy detritus, must have effected the gradual disappearance of navigable or continuous streams, and produced that series of swamps, and the kind of country, which, according to the most credible accounts, exits thoughout the vast Pampa territory.

I questioned my informant as to the nature of the rivers Colorado and Negro. He had frequently

been to the southward of the former river, which he says is capable of irrigating a vast extent of very fine country. From the Cordillera to the centre of the Pampas its stream is considerable, being both deep and broad; in some places its banks are steep and perpendicular, like that of the Tunuyan; in others low, and present great facilities of easy conduit, for purposes of agriculture. Like the Diamante, Tunuyan, &c. it it fully charged with muddy alluvium—hence its name; and like them finally becomes lost in extensive swamps about the middle of the Pampa country. He has never seen the river Negro, but he has been informed that it takes its rise from vast lakes near the foot of the Cordillera: he has been told it is a large and powerful stream, which agrees with other accounts I have heard of it. This river is, perhaps, navigable; its waters probably clear, as its name imports, when contrasted with all the other muddy streams flowing from the Cordillera. It is, however, much too far to the southward to be of any use in facilitating commercial intercourse between any parts at present civilized, and too far removed from all hopes of probable extension of trade in that direction, for ages to come.

We met a cart, laden with musk melons, and water melons, proceeding from the hacienda of Las Fortugas to the town of San Luis for sale. I purchased a good stock of these fruits, at the rate of a quarter of a real (three halfpence) each; they were of very large size.

April 22.—I rose at half past four, and called up our peons, determined, if possible, to accomplish two long stages this day; but I perceived among them a

preconcerted disposition to delay. By stopping, under various pretences, upon the road, they made it a journey of pleasure. Notwithstanding my utmost entreaties, I could not get the preparations completed till six o'clock. One obstacle after another was opposed, so that we did not set off till ten minutes before seven. Our course was SW and SSW.

For the first league we rode through the same beautifully wooded country seen about San Luis; we then passed over a broad quagmire, intersected here and there with clusters of algarrobas. At about three leagues from the represa, we ascended the gentle rise of the long sandy ridge which tends from the upper and more northern table lands, and terminates at the angle where the Desaguadero empties its waters into the Bebedero lake. On the other side, where the currents of rain water have worked out channels, we see below the surface of the sandy soil distinct formation of sulphated lime, in nearly transparent strata: hence the name given to the ridge—the Alto del Yeso.

Our peons, at the distance of every half league, stopped to arrange their saddles, or else to change horses; they availed themselves of every excuse for delay, the more so as I shewed greater anxiety to get forward—they seemed resolved that we should proceed no faster than they pleased. The saddles of the country, unless very carefully secured, very soon become slackened; and such is the number of cloths and pieces placed over one another, that it required at least ten minutes to put them in order.

As we reached the summit of the ascent, we distinctly saw the large lake Bebedero. The summit of

this low range is about seven leagues in breadth; it is covered with trees of chañar, of different algarrobs mimosas, of retamo; bushes of retamo, atamisque, harilla, xumè, vidriera, &c. and with numerous novel plants: at intervals, this shrubbery is intersected with extensive patches of scanty pasturage. No water is met with all the way, excepting upon rare occasions, immediately after the fall of rain. After descending the opposite side, we reached a level sandy traversia, three leagues in extent, covered with thorny trees.

At half past two we reached the banks of the river Desaguadero. The surface of the ground in the neighbourhood was covered with a saline efflorescence, in several places with a tolerably thick crust of salt. The river was considerably lower than the surface of the country; its banks were perpendicular to the depth of eighteen feet: at the fording place the bank was cut in a slanting direction, so as to admit of the passage of carts and coaches, but the road down each bank was very steep; so much so, that it was necessary to make our two men alight. They mounted behind two of their companions; but as the horses of these countries had never experienced the load of two persons on their backs, they began to kick and plunge, and one of the men was thrown off upon the margin of the river, but escaped with no other hurt than a good ducking in the salt water. The other horse also kicked and plunged upon feeling a load upon his haunches, but the riders managed to keep their seats, and arrived in safety at the opposite bank. The river was about one hundred feet broad, and three feet deep. The stream was clear, and flowed slowly to the east-

ward. When I passed this place in January, 1825, the river was unfordable, and it was necessary to seek the ferry farther to the southward; at this time the current was very slow, the water was muddy, fresh tasted, and at least fifteen feet deep, in its whole breadth.

At this place there is a ferry boat for the convenience of travellers; it is made of two canoes, each twenty feet long, hollowed out of the trunk of a large tree, connected together by means of several tough sticks, lashed with hide thongs: a large platform is thus formed, upon which equipage, saddle-traps, and passengers entrust themselves. Upon the opposite banks are two strong stakes fixed in the ground; from these a double lasso is tightly stretched. On the lasso is an iron ring, from which a hide rope is secured to the raft, and the ferryman, by means of the transverse rope, hauls the floating platform from side to side at his pleasure. The charge for ferrying is half a real (three-pence) for each passenger, and the same for each horse load of baggage. The horses are made to swim over in a body, one being tied to the canoe by means of a lasso, as without this precaution it would be impossible to collect and catch the others. The hut in which the ferryman resides is a miserable, dark, filthy hole. The ferryman himself is an ill-looking swarthy fellow; his family are a set of half-naked, idle, dirty creatures, and when we were there were entirely without food of any sort: they had neither a chair nor a table, and their rancho was filled with dirt and rubbish; yet this miserable being was brother to one of the judges at Mendoza, a principal merchant, a man

known to all foreigners—one who prides himself upon his taste for the habits and customs of the English, and whose house is well supplied with excellent British furniture.

The river Desaguadero takes its rise from the overflowings of the extensive lakes of Guanacache which cover great part of the Travesia to the southward and eastward of San Juan, into which lakes the two considerable rivers of San Juan and Mendoza empty themselves. The Desaguadero is therefore the continuation of the united rivers, or more properly the drainage of the lakes following nearly the course of the range of the Alto del Yeso, along its western base, until it becomes lost in the lake Bebedero, which is at the south eastern termination of this range. The body of water which flows into the Bebedero must be considerable; the stream is of the depth already described for three months in the year, when it constantly runs at the rate of two miles per hour. The quantity of water flowing into the lake from the river Tunuyan must greatly exceed the quantity brought by the Desaguadero. The Bebedero lake must, therefore, be very deep to contain in its confined circumference so vast a body of water. As the quantity lost by evaporation must be very small, and as no apparent outlet exists, it follows that the waters are again lost by very rapid subterranean filtration, for at one season of the year the Bebedero is much diminished in size, and its waters are strongly saline, so much so, that great part of the marginal space which has become dry is covered with a thick incrustation of salt, which is annually collected from the surface and taken away

for sale. A somewhat similar saline incrustation appears during the winter and spring seasons, on the dried margins of the Guanacache lakes, but this, containing a greater portion of the sulphate and carbonate of soda, is not used for domestic purposes. In fact, the whole plain, to the very foot of the Cordillera, is a loose and sandy soil, greatly impregnated with saline matter, which seems inimical to the growth of pasture in the natural way, and to those vegetable productions most useful to man. This immense tract of country is therefore properly called the Travesia, or the desert; much resembling similar tracts constituting a great portion of northern Africa. It is singular that a soil, by nature so completely sterile, should, by the assistance of irrigation alone, become the most fertile imaginable: the saline matter, in a soil so light, by the assistance of constant moisture, appears the most active stimulant to vegetation, and serves as never-failing manure.

Recurring to our narrative.—After crossing the river we travelled a short distance over the Travesia, and at three o'clock reached the post-house of Desaguadero. This place is situated in the midst of the Travesia: there is here not the least trace of vegetation excepting the few thorny bushes and saline plants which grow over the desert; it is at a considerable distance from any fresh water. There were two huts—one being a mere open shed, with a few dead bushes upon the sides to keep off the force of the wind. In this shed we saw five or six men and women squatted upon the ground, around a fire made in the middle of it; they were half naked, and their long dark hair hung loosely down their

backs—their copper-coloured faces and ferocious looks gave them completely the air of Indian savages.

The other hut was a miserable low hovel built of sticks, plastered over with mud; the roof was thatched with rushes; the door-way was so low that it could not be entered without stooping. On our arrival I went to the postmaster, who was the most savage looking of the whole set, and begged him to let me have a change of horses as quickly as possible, in order that we might complete another stage in the course of that day: this he positively refused to do till next morning, alleging as an excuse that the horses were not at hand, and could not be collected in sufficient time to move away at once.

To this he had been instigated by our peons, who on this occasion no less than in all others had done their utmost to retard our progress. I observed that the moment the coach stopped, one of our drivers stole away to the people in the shed, and entered into conversation with the postmaster: anticipating this, I endeavoured to be the first to address the postmaster, but in this intention I was defeated by the cunning of our guides. I used much persuasion to induce him to procure horses, but in vain. My companions were very anxious to proceed, as they had formed many fearful apprehensions in remaining here all night, from the roguish and savage appearance of the people. They took possession of the plastered hovel, and as it had no door they drew up the coach close against the entrance; and, thus barricadoed, they became satisfied of their security: we of course continued to sleep in the coach. No water

was to be obtained here—the people had to fetch it from the distance of four leagues, from a farm-house, named Tortugas, to which place water is brought by a small canal, several miles long, from the river Tunuyan. They bring their supply of water from Tortugas in two small barrels, carried on the back of a horse. Their store was now expended; they had, however, a small supply of wine, which they sold to me, and this in some degree reconciled my companions to the want of water. The people here as usual had no bread, but our company was supplied by the postmaster with some beef roasted over the embers, a kind of fare to which they had now become completely reconciled. We were disappointed in not having our usual meal of tea supplied by our canteen, but we made up for it as well as we could by a small supply of milk, which the postmaster was able to afford us.

April 23.—I rose this morning before break of day to hasten the postmaster in sending for the horses: when they came he endeavoured to persuade me that six horses were necessary for the coach, on account of the state of the roads, but as I considered this an attempt at imposition, I refused to accede to it. Although I would only pay for five, he put six horses to the coach, and as the distance to the next post-house of Coral de Cuero was eleven leagues, I paid for the hire of eleven horses and postillion, fifteen dollars seven reales.

We left this miserable place at a quarter past seven. The road lay over the great Travesia, or desert, which extends all the way to Mendoza, and beyond it to the foot of the Cordillera. The thorny

trees here are not so numerous as they are a little more to the westward, but the sandy plain, wholly devoid of pasture, is thinly covered with low bushes of various lyciums, verbenas, and saline plants, xumè, and vidriera. Barilla plants were in great abundance. I discovered here also a trailing plant of a new genus, somewhat allied to the falinum.

At the distance of four leagues we passed by the farm-house of Tortugas: this place is now established as a post-house, that of the Desaguadero being removed; the posting stage is now from San Luis to Represa, and from Represa to Tortugas sixteen leagues, the postmasters sending with the traveller a relay of horses, which are changed at the half distance on the Alto del Yeso, where a coral is made for the more convenient catching of the animals.

I shall here digress to describe the post-house of Tortugas, as I lately found it on my return from Chile. It is a very miserable hovel, kept by an Indian looking fellow, who has an excellent stud of horses.

Close by it is the Estancia house of one Delgado, the father of Antonio Delgado, the secretary of government in Mendoza, a young man, who in point of intelligence, quick perception, liberal sentiment, aided by the most disinterested patriotism, great personal activity, and vivacity of character, has never been equalled in Mendoza; he has been at the head and has borne all the brunt of the attacks of the Pehuconos or fanatic party, who with their riches and influence endeavoured to stifle the rising spirit of illumination and freedom. The brother of this Delgado is a perfect gaucho, very dark, of much

vivacity, though of little information; he was about to open a new canal for the irrigation of the estate, and at the same time to give power to a flour mill, which he proposed building: the estate has suffered much this year for want of water; the canal which hitherto supplied the Hacienda had been completely choked up with alluvial matter; he had already cleared it once, but it as quickly again filled up: the distance this canal was brought from the river Tunuyan was thirty miles; he proposed opening an entirely new and larger channel, which he hoped would not require renewing more than once a year.

The journey over this long stage of eleven leagues, or thirty-three miles, was as tedious as can be imagined; the country was a perfect desert, we did not see a single ox, horse, or other animal. At Tortugas we observed near the margin of the small canal, patches of grass produced by the aid of the fresh water brought by the irrigating channel. Two leagues beyond Tortugas we met a company of Mendoza carts, eighteen in number, laden with wine and figs, bound to Buenos Ayres. When we had arrived within a league of the Coral de Cuero, one of the hind wheels of our coach broke; the nave opened greatly, so that the spokes ceased to have any firmness; recourse was had to the only remedy the country affords in such cases—strips of wet hide were lashed round the nave, which, as they dried, in some measure compressed the openings, and at all events prevented the expansion from becoming greater. Hereabouts a little grass was seen, indicating that we were approaching the limits of irri-

gation. We reached the post-house of the Coral de Cuero a little before noon; this consisted merely of one large miserable rancho, kept by people equally miserable; around it was a large coral of stakes for the cattle. The temperature of the air at noon was 56° Fahrenheit. The road over the desert was said to be equally heavy and sandy as the stage we passed this morning; I therefore consented to hire six horses for the coach, and as the distance to the next stage of Coro Corto was nine leagues, I paid thirteen dollars for the charge of horses. When I returned last year from Mendoza, I found the post-house removed to a place called Las Pirguitas, about half a league nearer Tortugas; I shall therefore digress to describe it.

The post-house of Las Pirguitas is eight leagues from Tortugas: it consists of three miserable hovels constructed merely of rushes, without doors, or any of the usual rude furniture. It is kept by a very tall stout good-natured fellow, named Lorenzo Gomez, who has a large family, and many grand-children, all of whom are huddled together in this place little better than a pig-stye. Formerly it was the practice of the Spanish government to give to the post-masters at all the different stages a large tract of freehold ground; and it was usual to assist them with loans of cows, sheep, and horses, by which means they became independent, and had such an interest in their possessions as could not fail to afford the most certain facilities to commercial and government intercourse. Hence many of the earlier settlers among the Indians have, in progress of time, grown into large farmers, and have become persons of con-

siderable influence in their several provinces. Some of these postmasters have saved nothing, others have degenerated to Indian-like habits: to these property was of no value, so long as they remained at their ease, and could obtain plenty to eat and drink: they sought not for artificial comforts, of which they were ignorant, and so long as mere animalization could be maintained, and they had free use of the only pleasures they knew, they were contented and happy, seeking no advance beyond the condition of the savage liberty they enjoyed. We have a remarkable instance of this even in present times in the case before us. General San Martin, when he first directed his views towards Chile and Peru, and began to establish himself in Mendoza, found the post of the Coral de Cuero very ill attended to: acquainted with this Lorenzo Gomez, and knowing the obligingness of his disposition, he made him a grant of a piece of ground nine miles long, upon the river Tunuyan, and three miles broad, and set him up in this spot of the Perguitas. Although this man has lost the greater part of his stock from the predatory incursions of the Indians, he still owns 400 capital horses, 1,000 sheep, a large flock of goats, and several hundred horned cattle; yet no one would believe the miserable condition in which this family, above twenty in number, exist; neither man, woman, nor child seem ever engaged in any useful occupation; they are all barely clothed in ragged ponchos and worn out flannels; their skins covered with filth and dirt; their long wiry hair loosely hanging over their faces and down their backs; their hovels open to the entrance of the wind on all sides; no chairs on which

to rest their limbs; no other bed than the bare ground, over which a hide or a couple of sheep skins are stretched, and yet all are fat, healthy, and contented. It is impossible for any one, who has never witnessed such scenes, to form an adequate conception of the very degraded existence of these people. This is a fair specimen of a great part of the inhabitants of these provinces, who, possessed of the most ample and abundant riches, enjoy nothing but the extreme of poverty and misery. Within the limits of San Luis, and more especially in the province of Mendoza, the traveller finds plenty to eat in the post-houses; a lamb is at all times to be bought for two reals—one shilling; bread may also be obtained at most of the post-houses: indeed, in this third part of the route, not only does a traveller meet with better fare and greater civility and obligingness, but he has given to him the best horses, and is forwarded with greater dispatch.

From this place I could distinctly perceive the distant Cordillera at sun-set, with the peak of Tupungato, towering above the undulating line of snow: so distinct was the outline, that I am sure it might have been seen at a far greater distance; a direct line drawn between Tupungato and this place will measure about 150 miles: many have informed me they have frequently seen the same peak from San Luis, a direct distance of 218 miles; while others, and among them General San Martin, have assured me they have even seen it at the Morro de San José, a distance of 256 miles. The height of Tupungato, for reasons stated in another place, I calculate is 15,000 feet above the level of the sea: we may

therefore judge of the clearness of the atmosphere enjoyed in this fine climate, by the comparatively greater distance at which equal elevations may be seen in different places. Tupungato bore from this place W by S.; the variation from observations I made six years ago may be assumed at 16° east.

At the post-house of the Coral de Cuero, I met an Englishman who had been a deserter from General Beresford's army, and now with difficulty spoke his native tongue. He was in character, for he was then tippling, and had set himself in for the pleasure, of degrading himself to a condition which even these savage peasantry seldom descend to. He was a kind of pedlar, selling tobacco, paper for segars, spirits, sugar, yerba, and such like groceries as enter into the few wants of the gauchos, receiving in return hides, cattle, or corn. His head quarters are at Mendoza, where he is an habitado of a native merchant.

We left the post-house of Coral de Cuero at half-past twelve, and proceeded on our journey. Our road at first passed over the desert, but at the distance of about half a league we came within sight of the river Tunuyan, along whose banks we continued to travel all the way to Retamo, a distance of 100 miles. At this place, the river turns to the southward, and finally empties itself into the Bebedero lake, as already stated. Hereabout are several cultivated patches of ground. About half the way to the next stage the road passes through a grassy district every now and then, verging close to the angular turnings of the river; the banks are nearly perpendicular to the

depth of twenty or thirty feet, the whole soil being loose and sandy; the breadth of the stream in some places is considerable, varying from a quarter to half a mile; the stream is continually changing its course, dividing itself into two or more branches, from the continual removal of old banks, and the fresh depositions of others. The remainder of the way is through an arid sandy district, on which grow trees and bushes, common throughout the Travesia. We continued at intervals to approach the angular turnings of the river. At half past two the thermometer rose to 70° Fahrenheit; the day continued cloudy. We passed through the village of Coro Corto at half-past four: this is a small village consisting of about fifteen or twenty huts built of sun-dried bricks, each surrounded by gardens enclosed by mud walls; there is a church with a small square turret having a bell in it: the whole place presented the appearance of extreme poverty. The post-house of Coro Corto is nearly two miles beyond the village. The postmaster had removed here only twenty days before from the old post-house, which was another league in advance: his hut was not yet finished, though thatched with rushes; the walls, which were constructed of stakes and bushes, were not yet mudded over, and the wind blew in at all parts. Another shed built near to it, served as the cooking place: there was no other habitation near to it. The postmaster was a very civil well-behaved man, and his family, consisting of his wife, several grown up sons and two daughters, with their husbands, were no less obliging. On our arrival all bustled about to prepare a meal for us; they had no meat

to offer, but three fowls were killed, cut up, and stewed in a large earthen pot. The broth, though smoked, and the fowls, though hard and tasteless, were both welcomed by our travellers, as it was a change of diet to which they had not, for a long time, been accustomed. The people here slept in the open air, in preference to the half-covered hut; none of them, not even the postmaster, had a bed; no one cast off his clothes; but each, stretching out a dried hide upon the bare ground, laid upon it; a number of saddle-cloths were spread thereon, and they covered themselves with their ponchos. The women slept in the same manner inside the hut, but it is usual for females to sleep also in the open air. The wind blew boisterously, so much so, that before we retired to sleep, we could not keep a candle alight in the coach. These huts, like all those in these parts of the country, have no doors. I was for some time at a loss to understand why these people should thus prefer sleeping exposed to the boisterous winds, in the open air, in preference to the shelter of a roof; but on a better acquaintance with the country, the cause became evident. It is owing to the dread of the benchuca, a winged variety of the cimex; it is in shape and form like the common house-bug, but of the size of our cockchafer. This insect conceals itself by day in the thatch and cane roofing of the houses, and sallies forth by night in quest of food; the people therefore place their beds at some distance from the hut, and always to windward, to avoid their attacks. They annoy mankind after the manner of our common house-bug, but from their size are terrific enemies. They

are thin and flat, like the common bug; but after satiating themselves with the blood of man, they become quite round; they take from him as much blood as the ordinary medicinal leach. Cleanliness and care is not of the same avail against the benchuca as against the common bug, since, being winged, it can transport itself from one place to another. It is common over the districts of Mendoza, San Juan, and the more northern provinces. In the town of Mendoza, this insect is very numerous; and one of the reasons why all the roofs are covered over with a plastering of mud, is to prevent a harbour for this enemy to mankind: in Mendoza the inhabitants, both men and women, generally prefer sleeping in the court-yards of their houses; but when they do sleep in doors, it is an undeviating custom, before retiring to rest, to examine the walls carefully, as the benchucas generally crawl out of their hiding place in the canes of the roof after dusk.

April 24.—I rose very early, to urge dispatch, and by five o'clock the horses were collected in the coral. The morning was extremely clear, and I could distinguish a long extent of the distant Cordillera; Tupungato was particularly remarkable. The charge of the postmaster for our meal was more than we had hitherto paid; it was two dollars and a half. The posting charge to the next stage of La Dormida, a distance of nine leagues, for eleven horses was nine dollars. We left the post-house of Coro Corto at half-past six o'clock, our course being for the most part west. The road continued to lead over the saline and sandy desert, and at intervals, where the angular turns of the river approached the road,

we passed close to the Tunuyan. During this day I observed numerous flights of a small green parrot called catitas, very common all over this immense travesia: they are smaller than a turtle dove.

On the road we passed a large troop of mules, laden with barrels of wine, proceeding from Mendoza to Buenos Ayres. We reached the post-house of La Dormida at half-past ten. This place consists of three very wretched huts; but the postmaster was obliging, and provided us with excellent horses.

The day was remarkably fine, and the horizon extremely clear, so that the Cordillera was sharply defined; these stupendous mountain ranges became more distinct as we advanced; the sight of them engendered feelings of great interest and deep anxiety; the lateness of the season, my large cavalcade, the great inconvenience and serious loss that would ensue in case of our detention; but, above all, the situation of my wife, and the fear that she might not be able to accomplish so tedious and so laborious a journey, excited reflections of intense anxiety.

To the next stage of Las Catitas, distant six leagues, I paid for eleven horses and the postillion five dollars. Our road continued over the same kind of travesia: thorny trees of chañar and algaroba abounded; and the xumé, vidriera, and retamo, which in most parts of the desert are mere bushes, here attain the height of trees, and acquire a central thick wooded stem. We passed on the road four troops of mules loaded with barrels of Mendoza wine; they consisted of fifty, forty-two, forty, and thirty mules. At twenty minutes past two we reached the post-house of Las Catitas. This was

one of the neatest post-houses I had seen upon the journey; it consisted of a range of buildings constructed of sun-dried bricks, plastered smoothly, and white-washed; in front was a neat corridor; behind the house, and on one side, was a large garden, enclosed by a rammed earthen wall. On my return from Mendoza, last year, I was surprised to witness the miserable and ruinous appearance of this place. In this province, owing to the nature of the soil, both adobe buildings and rammed walls quickly disintegrate and tumble to pieces, from the efflorescence of the saline particles which are disseminated throughout its substance. The same is even seen in Mendoza: whenever the houses are neglected, the rammed earthen walls forming the enclosures soon crumble to pieces, and require to be renewed every four or five years. The postmaster does not at present reside here; but the relays are provided by servants, who are disobliging and unwilling. I paid here, for charges of posting to the next stage of Rodeo de Chacon, a distance of six leagues, eight dollars, five reals. We started again upon our journey at five minutes before three, and passed along the winding banks of the river Tunuyan; for the greater part of the way the desert continues to be covered, only more thickly than usual, with the same kind of wood-trees of chañar, algaroba, mimosa, retamo, atamisque, and others, together with bushes of harilla, vidriera, xumé, and lycium. Here is also abundantly seen the pretty diminutive mimosa, called retortuño, with its beautiful, regularly spiral, and yellow seed vessels. The bed of the river is about twenty feet below the level of the soil, and

the banks quite perpendicular: it is very broad, and the stream spreads over it in different arms, divided by numerous banks of alluvial matter, which shift their situation, and change the course of the river, continually. The day was very sultry; at half-past two the thermometer was 92° Fahrenheit. We arrived at the post-house of the Rodeo de Chacon at ten minutes before five. This had been one of the most rapid stages we had made: since we had reached the post-road we had travelled twenty-one leagues, or sixty-three miles, and accomplished it before five in the afternoon.

The post-house of Rodeo de Chacon was very miserable; it consisted of two very wretched ranchos, and the horses were very bad. The situation is within sight of the river Tunuyan. Large flocks of goats and sheep are reared here; the sight of goats was quite novel to us. After partaking of our usual meal, we retired to rest, with the consolation that we should next day reach Mendoza.

April 25.—I rose as usual very early, in order to hasten the preparations for our departure; every body displayed more than usual cheerfulness, in the hope that, after this day's journey, they would enjoy a respite from fatigue for a few days. I paid twelve dollars and a half for the posting charges to Retamo, a distance of nine leagues; and for our fare I was charged one dollar. We started at thirty-five minutes past six; our course continued over the travesia. Soon after leaving the post-house, we lost sight of the river Tunuyan, which here tends more from the southward, towards the point where it issues from the Cordillera, about sixty miles to the

southward of Mendoza. At the distance of fifteen miles from Rodeo de Chacon, the soil, for a short space, presented a quantity of granitic grains, mixed with the sand. We met a troop of Mendoza mules, consisting of forty-eight loads of wine, destined to Buenos Ayres.

We reached the post-house of Retamo at five minutes past ten; about a league before we arrived here we were gratified with the sight of rich verdure and enclosed grounds of pasturage; this was owing to irrigation: the water is brought in a channel from some distance above, at a higher level from the river Tunuyan; it is employed in irrigating a considerable tract of country; in the midst of this is the post-house of Retamo. In the neighbourhood are several habitations, pasture grounds, and beautiful plantations; some enclosed by tapiades, or rammed earthen walls; others by fences of poplars and willows, planted close together. The sight of objects so agreeable are more pleasing than can be imagined after the eye of the traveller has been fatigued by the incessant view of nothing but sterility, and tediously unvarying objects.

The post-house of Retamo is unquestionably in every respect the best on the whole road from Buenos Ayres to Mendoza; it is an extensive, well-built house, and kept by a man of very respectable family, who is the owner of a well-stocked farm in the neighbourhood. There is an excellent pulperia attached to it; it has very decent accommodations for travellers. The horses are good; and there is an obliging willingness about the people,

which cannot be found in any other place along the road.

The coach remained in the road, as the post-house was at some little distance, and within a slight enclosure. I purchased some bread and cheese, and was able to regale my company with plenty of Mendoza wine. While the horses were changing, three or four men civilly accosted me, telling me they were custom-house officers. They demanded first a sight of my passport, and then requested to examine my luggage. The portmanteaus borne by the pack-horses were first searched very minutely; they then proceeded to examine the contents of the coach, overhauling, with especial care, every article. Their attention was particularly excited by a case containing a theodolite and other philosophical instruments, which I had selected from my luggage in Buenos Ayres, in case any opportunity might offer for making use of them. These instruments excited much suspicion among them; they had never beheld before in their lives such gold-looking instruments; and though told of their use, they seemed not to credit me, but remained half suspicious, and these suspicions operated to my annoyance on my arrival in Mendoza.

The road was overflowing with water, running waste from some of the irrigating channels which had burst their margins. While waiting here, a troop of twenty waggons passed, laden with wine and dried fruits, for Buenos Ayres. The horses being ready, I paid fourteen dollars and a half, and we started at eleven o'clock for the Rodeo del En-

medio, ten leagues distant. For the first six miles the country on both sides of the road was brought into a state of cultivation, being divided into numerous enclosures by walls of rammed earth: some of the enclosures consisted of rich pasture grounds of alfalfa (lucerne) growing to the height of four feet; many of corn, maize, beans, and gardeners' grounds. We soon after crossed the river of Mendoza; it was rather broad, but not deep: when I crossed this river last year, on the 20th of January, it was in most places difficultly fordable on horseback; it had been impassable for nearly two months previously; it was necessary to go out of the usual road some distance to the southward, to a part called La Vuelta de la Cienega, where I had to cross nine different arms of the river, most of which were four feet deep. The quantity of water brought from the Cordillera at this season of the year is usually very great, but it is mostly lost by evaporation and absorption in the lakes of Guanacache. About a mile beyond the river we passed another extensive portion of cultivated ground, and a little village called Los Barriales. Here we saw a chapel next door to the pulperia; and the whole population of the village, dressed in their best attire, were drawn to the spot; some were crowding out of the pulperia into the church, and others out of the church into the pulperia. While devotion was going forward in the one—drinking, dancing, gaming, laughing, and merriment, were seen about the other, in which men and women equally joined. This is an estate belonging to General San Martin, given to him by the government of Mendoza, in return for the ser-

vices rendered to that town, and for his conduct generally, in the earlier part of his career. The government of Mendoza, in order to promote a more extensive cultivation of the province, and to encourage the industry of its population, grants freehold possessions to whomsoever chooses to settle here: the ground is sold at the rate of three dollars per quadra (12*s.* for nearly five acres) together with the right of water, on condition that the purchaser encloses the possession with a rammed earthen wall, and cultivates it within a certain time.

During this stage, we crossed many gutters and boggy swamps, caused by the overflowing of the numerous irrigating channels from the small cultivated possessions which at frequent intervals appeared on each side of the road. Soon after crossing the river we met with an accident; our peons drove over a stump of a tree, which had been carelessly felled in the road; my wife was thrown off her feet by the concussion, and struck her head with much violence against the roof of the coach; it shook her very much; but fortunately she soon recovered from the effects of the blow. It was discovered that one of the hind wheels had been broken by the jolt, and it was necessary to proceed with much caution. We continued to cross the desert, its sandy barren soil producing not even a single blade of grass, nothing indeed but thorny trees and bushes, barilla plants, and saline shrubs: contrasted with those spots where it was merely watered by small channels of fresh water, which overflowed it at intervals, and made it luxuriantly productive, and beautifully verdant, was remarkable. About two miles before reaching

the next stage, we again passed by extensive cultivated grounds, and rammed earthen enclosures which continued till we arrived at the post-house of Rodeo del Enmedio: it was now ten minutes past two: this was a large building newly erected: it was a superior kind of structure, built of adobes, plastered with mud, and whitewashed; its roof was mudded. Here our peons endeavoured to remedy the effects of their careless driving; for the wheel was now found to have become so shattered that it was doubtful whether we could reach Mendoza, a distance of only five leagues, in safety. I was resolved at least to make the attempt, and had recourse to the only resources the country could afford—the use of hide. I purchased some long strips of hide, and made the peons brace up the broken spokes, and the shattered rim of the wheel: this was a dangerous expedient, especially as we were told the road was very bad. The horses supplied to us were very poor. After paying seven dollars and a quarter for the change of horses, we left the Rodeo del Enmedio at three o'clock.

We soon again entered the travesia, and at the distance of four miles passed several cultivated enclosures, and those again occurred at other intervals in the barren travesia, which formed the greater part of the road. About six miles before we reached the town, cultivation again appeared, and continued uninterrupted all the way to Mendoza. The houses soon became more numerous, and at length we found ourselves in the suburbs. Every where were seen extensive vineyards, and numerous large and lofty fig trees, whose wide-spreading branches and thick-

set foliage shed around an enticing retreat from the broiling influence of the sun. At frequent intervals the irrigating channels crossed the road, and bridges of small logs of wood were made over; these were sufficiently wide for a coach or a cart to pass over. We passed several of the female peasantry of Mendoza, mounted on horseback: they wore men's hats, and were seated in the common saddle of the country, called a silion. As we approached, the number of people on horseback increased; troops of mules and carts indicated our rapid approach to a considerable population: proceeding with much caution, on account of our broken wheel, we at length entered the town of Mendoza. It was fortunate we had no further to go; for, independently of the disabled condition of the coach, our portmanteaus were so much worn that the clothes they contained were protruding from the rents in the angles. We passed through the public square, and after traversing three or four quadras stopped at the door of the inn, a few minutes before six o'clock.

It may be useful to state the expenses attendant upon the journey from Buenos Ayres to Mendoza. A foreigner who is pretty well acquainted with the road, and who travels with no other luggage than what he may carry in his saddle-bags, may perform the journey in ten days; his expenses in this case will be very trifling; one horse for himself, another for his guide, is all he will have to pay for; and these, together with five dollars for his travelling expenses, will not amount to more than fifty-five dollars (eleven

pounds sterling) or under three-pence per mile for the whole distance. No one, however, would do this unless from motives of economy, or from a desire to hurry forward: most persons would travel with at least one or two loads of baggage, including his portmanteaus and his bedding; in this case his expenses would be doubled, say 105 dollars; but a person who is a perfect stranger, unless he travel with company, will require a peon the whole way to facilitate the necessary change of horses at every stage, for the postillion who accompanies him goes only from one post to another; he is paid by the postmaster, and the traveller pays only for the postillion's horse at the same rate as his own; it will therefore be understood that it is the obligation of every postmaster to find a fresh postillion upon the above conditions. The use of a separate guide who shall accompany him the whole distance, and act as his servant, will therefore be apparent: the hire of such a peon will be thirty or forty dollars, and the cost of his horse another twenty-five dollars; so that the total expenses of a traveller, with two loads of baggage and a servant, will amount to 170 dollars. When travelling with luggage, so much time is lost in changing horses, loading them, and adjusting them on the road when they lose their proper balance, that few can accomplish more than from twenty to twenty-five leagues per day. The rate of posting is established according to fixed regulations, from which no regular postmaster dares vary. From Buenos Ayres to San Luis, a distance of 222 leagues, the rate of hire of each horse, be it either saddled or loaded, is half a real per league; but from San Luis to

Mendoza, owing to the necessarily greater length of stages, and the scarcity of pasture across that desert country, the charge is double, or one real per league for each horse employed. It will be necessary to carry as much small silver as will pay the expenses, for no where can larger money be changed, except, perhaps, at San Luis. It is not possible to contract for horses for the whole distance, each postmaster receives his separate charge before the horses start from his door. Another expense is the post-office dues. No postmaster dare hire horses to a traveller unless he have obtained a licence from the post-office, which is given on payment of the requisite fees; no one will ask for this licence but the first postmaster; the arrival of horses from the preceding stage is a sufficient warrant for all the others to grant a fresh supply. The rate of fees is one-tenth of the whole posting charges to Mendoza, and also about an eighth of this; suppose the hire of four horses, for instance, to Mendoza, the posting charges will be about 200 dollars; and the post-office fees,

La decima parte	(the tenth part)	20
La parte	(the part)	$2\frac{1}{2}$
	dollars	$22\frac{1}{2}$

Although it is by no means necessary, yet a traveller who speaks the language may sometimes obtain better horses by some little present to each postmaster; such as a small piece of tobacco, or a little sugar, which he will carry with him for the purpose. The horses generally provided at the post-houses are very bad, not only poor and miserable, but badly broken

in: their motion is violent, uncomfortable, and very fatiguing to the rider. Many are difficult to mount; so that it requires a little dexterity, as they invariably turn round quickly the moment the foot is placed in the stirrup. Once mounted, the postillion sets off at a full gallop, leading the loaded horses; the traveller follows at the same pace; and if the stage be moderate, say five or six leagues, and the loads well adjusted, the horses will continue at the same gallop, without once stopping, all the way. The usual rate of this gallop is four leagues, or twelve miles per hour. At this pace it would be easy to accomplish the journey in a few days; but the traveller will generally find, that, although not more than an hour in riding each four-league stage, he will be from two to three hours at the post-house waiting for horses for the next stage; and he will generally travel faster in the long stages between San Luis and Mendoza, than he will in the very short posts in the provinces of Santa Fè and Cordoba.

TABLE I.

Distances of the Posts by the Southern Road of the Pampas, between Buenos Ayres and Mendoza.

	Distance of each post in leagues.	Distance from Buenos Ayres in leagues.
From Buenos Ayres to the Rio Areco, as per Table III		23½
Areco	5½	29
Salto	14	43
Chacras	5	48
Roccas	6	54
Lago del Cabeza del Tigri	6	60
Mercedes	6	66
Melinqué	10	76
Lastunas	30	106
Loboy	12	118
Puente del Sauce	8	126
Algarrobas	8	134
La Reduccion	8	142
San Bernardo	6	148
Rio Quarto	5	153
Cabral	6	159
Barranquitos	10	169

TABLE II.

Distances of the Posts from Buenos Ayres to Cordova.

	Distance of each post in leagues.	Distance from Buenos Ayres in leagues.
To Puenta del Sauce, on the Mendoza road, as per foregoing list		126
Esquina de Mandrano	7	133
Esquina de la Heradura	4	137
Rio Tercero	4	141
Tiopuxio	4	145
Ojo de Agua	4	149
Cañada del Gobernador	4	153
Impira	6	159
Rio Segundo	5	164
Punta del Monte	6	170
Cordova	5	175

TABLE III.

Distances of the Posts from Buenos Ayres to Santa Fè.

	Distance of each post in leagues.	Distance from Buenos Ayres in leagues.
From Buenos Ayres to Santos Lugares	3	3
Las Conchas	3	6
Arroyo de Pinazo	4	10
Vicestro Señor del Pilar	4	14
Cañada de la Cruz	5½	19½
Rio Areco	4	23½
Cañada Onda	8	31½
Cañada de Vellaca	4½	36
Rio Arecife	4	40
San Pedro	5	45
Las Hermanas	8	53
Arroyo de Remalla	4	57
Arroyo del Enmedio	4	61
Arroyo de Pabon	4	65
Arroyo Leco	3	68
Rosario	5	73
Espinillo	4	77
San Lorenzo	3	80
Carcaraña Rio	5	85
Barrancas	5	90
Coronda	6½	96½
Lomas	4	100½
Monte de los Padros	5	105½
Santa Fè	3½	109

TABLE IV.

Distances of the Post-houses upon the Road from Buenos Ayres to Mendoza.

	Distance of each post in leagues.	Distance from Buenos Ayres in leagues.
Puente de Marques	7	7
Cañada de Escobar	6	13
Luxan	3	16
Cañada de Rochas	2	18
Cañada de la Cruz	5	23
Areco	6	29
Chacras de Ayala	5	34
Arecife	7	41
Fontezuelas	8	49
Cañada de Gomez	4	53
Arroyo del Enmedio	5	58
Arroyo del Pavon	8	66
Cerrillo	8	74
Orqueta	6	80
Candelaria	5	85
Desmochadez	4	89
Arequito	4	93
Esquina de la Guardia	4	97
Cabeza del Tigre	7	104
Esquina de Lobaton	5	109
Saladillo	4	113
Barrancas	4	117
Zanjon	4	121
Frayle Muerto	4	125
Tres Cruces	4	129
Esquina de Medrano	4	133
Arroyo de San Josè	8	141
Cañada de Lucas	5	146
Punta de Agua	6	152
Santa Barbara	9	161
Tegua	4	165
Corral de Barrancas	4	169

	Distance of each post in leagues.	Distance from Buenos Ayres in leagues.
Tambo	4	173
Aguadita	4	177
Barranquitos	4	181
Achiras	5	186
Portozuelo	5	191
Morro de San Josè	7	198
Rio Quinto	12	210
San Luis	12	222
La Represa	7	229
Las Tortugas	16	245
Pirguitas	8	253
Coro Corto	8	261
Dormida	10	271
Catitas	6	277
Rodeo de Chacon	6	283
Retamo	9	292
Rodeo de Enmedio	7	299
Mendoza	5	304

CHAPTER III.

MENDOZA TO VILLA VICENCIO.

Mendoza and its neighbourhood described.—Climate.—Diseases.—Vineyards and Wines.—Leave Mendoza.—Journey to Villa Vicencio—Disaster there.—Consequences.—Place described.—State of the Weather.—Return to Mendoza.

WE arrived in Mendoza about six o'clock in the evening of the 25th April, 1819, just as it was growing dusk: as the coach was driven up to the door of the inn, the host came out to receive us. He conducted my wife to his private house on the opposite side of the way, while I attended to the discharging of the luggage, and the accommodation of my retinue. The coach was obliged to remain in the street, as the door of the yard was not large enough to admit it: no sooner was the luggage carried in than the custom-house officers, not contented with the examination we experienced in the morning at Retamo, now presented themselves and demanded to look at the contents of our portmanteaus: this odious task they performed in a very rude and annoying manner—they grumbled much at the quantity of linen, and more so when they were told it was only the stock required for the journey, as the great bulk of my equipage had gone round by sea: this was beyond their comprehension, especially as a shirt will serve the best of them upward of a

month without being washed. We were accosted by our former travelling companions, who were lodged in the same inn. The room allotted to us was a miserably dirty place, having no window in it, so that to obtain light it was necessary to open the door, which looked into the court yard. The doctor and my men were lodged in a large room adjoining mine, which was still more filthy and incommodious. The kitchen was a large place, in which there was great bustle of preparation; a kind of counter stood in the middle, upon which the cook and his assistants served up the dishes. The fireplace was near one of the corners, close against the wall: it was a flat hearth, raised three feet above the floor, about ten feet long and four wide, terminated above by a sort of cupola, raised upon arches, all made of sun-dried bricks, and its short chimney passed through the roof, by which the wood smoke, and heated air escaped—the fuel was wood. Upon the burning ashes a great number of iron and earthen pots and vessels were set. After ordering supper, I was glad to retire from the dirty pandemonium. We walked into the coffee-room, a narrow filthy place, across which there was a counter, and behind it were scattered on a few shelves some bottles and sweetmeats. Here a man dealt out chocolate to several persons, who stood before the counter while they sipped it: they paid two reals (1*s.*) for each cup. Hence we stepped into a room filled with people: many were seated round four tables, and those again were surrounded by groups of bye-standers, who all seemed to take an equal

interest in the game. The presence of two foreigners excited no attention, for every one was too deeply occupied in gambling to take notice of any thing else. The presence of an English lady, the third who had ever visited Mendoza, might, it would have been supposed, have called forth some display of curiosity or remark, but it did not: this is characteristic of the people, with but few exceptions, all over South America. This was on a Sunday night; the game was one of hazard, called Montè, a favourite play in all Spanish societies: there were assembled round the four tables about fifty persons, and though at each table one person only seemed to play the cards, all around were betting what they pleased upon the cards as they were turned up by the dealer or banker, who at all times manages the numerous stakes, and bets against the whole company. Each table was covered with heaps of money, many piles of gold onzas (each worth three guineas) numerous others of dollars, and several of smaller money. I was astonished to observe the high bets and the great quantity of money upon the table: no less than the quick succession of the hazards, and the eagerness as well as quietness with which all pursued the game. While engaged in contemplating this novel scene, I was surprised to observe on a sudden a general and rapid movement of the whole company toward the door, and in an instant to see every individual upon his knees beating his breast and muttering a prayer; we alone remaining behind lost in amazement at the cause of this mysterious occurrence. After a short and silent

pause the whole company returned, with great precipitancy, each scrambling to resume his former place, and to engage himself once more in the amusement that seemed to interest him so deeply. On inqury I found this general movement was caused by a *temblor*, a slight shock of an earthquake, to which as strangers we were yet insensible, for neither of us experienced the least sensation.

Hence we strolled into the billiard-room, where many men and boys were assembled, some playing, others looking on.

From the midst of their gambling scenes, our attention was directed to another scene of a very opposite character; it was a long procession of Monks, each carrying a lighted candle, placed in a lantern, affixed to a long stick; they walked slowly along chaunting and singing: in the procession I observed different silver crosses, chalices, &c.: it was a *funcion* of one of the convents, but for what purport I could not learn. We retired to rest in the hope of at length enjoying a good night's repose after our long and fatiguing journey, but my anticipations were vain: I had no sooner fallen to sleep than I awoke in horrible torment; I had been attacked by hundreds of filthy insects, which had raised upon my skin numerous large painful vesicles; I struck a light and discovered scores of bugs; I never in my life beheld such a sight: fatigued as I was, I again endeavoured to sleep, but was soon awoke by my formidable enemies—my patience could not endure the torment, I was obliged to dress myself, and seated in a chair, I obtained a little rest until the morning

dawned, when I was relieved from my terrible purgatory.

April 26.—The inn I found was kept by a man named Sarrasa, an Italian by birth, though by education a Spaniard: since the revolution he had been governor of San Juan, but he had retired from public life to follow the more profitable business of an innkeeper. He was a tall thin man, with a sallow aspect, large whiskers, and dark curly hair. Soon after breakfast his wife came to fetch my wife to her house, while I was occupied in preparing for our future journey. I found a muleteer, with whom I bargained for our conveyance to Chile: our party were eight in number, our baggage was comprised in four burdens, and I engaged to pay eight dollars each for twelve mules. I brought four saddles with me from Buenos Ayres, so that it was necessary to purchase one for my wife, and to hire of the muleteer three others, at the rate of three dollars each: the whole sum therefore for which he bargained to place our party in Santiago was 105 dollars. I urged him to use all possible dispatch, and he agreed to start on the Wednesday morning, this was on account of my wife, who was fast advancing to the end of the eighth month of pregnancy, and every day's delay only rendered her passage through so arduous a journey more hazardous. About ten o'clock I called upon the Governor to obtain passports, but was told he had not risen; at noon I obtained an interview with him. Colonel Luzuriaga was at this time governor of the place: he was a man of polite address, rather stout, and of middling stature; there

was nothing in his physiognomy indicative of a mind above the common cast. He is said to have been an instrument in the hands of a principal leader to carry into effect many of the reprehensible acts, which the events of the revolution called forth.

On taking my passport, the Governor told me it would be exchanged for another the day before I should leave Mendoza, and after an interchange of civilities, I took my leave of him. His house was a neat little private residence in the Plaza (the square), in which was also the town hall of the Cabildo, an ugly miserable building, with a few poplars before it. There were several other private houses, some with corridors in front. In a room at one of the corner houses was the post-office. On the outside of the footpath had been recently planted a row of young poplars. The centre of the square, outside the trees, was an open plot of ground, one hundred yards square, having in its centre a copper fountain of neat construction, throwing up a *jet d'eau* into a basin, from which the town was supplied with water. The town is built in rectangular squares, all of equal size: it is exceedingly neat and clean, the houses are all of one ground story, there being only in the whole town one or two dwellings possessing an upper story: they are built of adobes (sun-dried bricks) plastered with mud and whitewashed: the footways are raised, and mostly paved with burnt bricks. On my return to the inn, I found a host of arrieros (muleteers), waiting to obtain the preference of conveying us across the Cordillera. My wife was pleased to witness my re-

turn, being heartily tired of her new female acquaintance, with whom it was impossible to maintain a conversation, as she could talk of nothing but dress: the ignorance, pride, and conceit of the females of Mendoza are intolerable. We dined upon Spanish fare, and had afterwards a desert of excellent fruit.

We spent the evening with Doctor Colesberry, a physician from the United States of North America, who had left his native country, labouring under a severe pulmonary affection, from which he had entirely recovered in the genial climate of Mendoza. He follows his profession, is one of the most amiable and deserving men I ever met with, and is justly admired by all the inhabitants of Mendoza. To this deserving gentleman I shall ever feel under great obligations for the kind attentions he showed to my wife during her long subsequent sojournment in Mendoza, and for the friendly assistance he rendered us at the period of our great embarrassment at Villa Vicencio. Doctor Colesberry described the climate of Mendoza as exceedingly salubrious, especially in cases of pulmonary affection, instances of which had come under his observation, and which have since been confirmed by others. Dr. Gillies, a Scotch physician of great ability, now resident in Mendoza, has afforded a no less remarkable instance of the efficacy of this climate; he was obliged to leave his native country from a pulmonary affection, from which he was quickly relieved by the air of Mendoza. The population was described by Doctor Colesberry to be very healthy. I inquired particularly respecting the tendency to

bronchocele, having noticed two goitres as I entered Mendoza: this affection he assured me was prevalent here, as well as in San Juan, a town 150 miles to the northward, but not so much so as in the more northern districts of Tucuman and Santiago del Estero, which are still farther removed from the elevated Cordillera, and the region of snow. These places are particularly noted for the frequency of bronchocele; these towns are situated in swampy valleys, subjected to insufferable heats, surrounded by forests and stagnant lakes, which render the air extremely insalubrious: he had never observed bronchocele combined with cretenism, as we find in certain alpine districts; he had, indeed, no where observed an idiot, nor had he seen an instance of mental derangement. Deformity was seldom met with, and the Mendozinos, from the blessings of their climate, were free from numerous evils to which other countries are much subject. The people he confessed were backward in the most ordinary attainments, although he believed every disposition existed on their part to be better informed. At San Juan, education was making some progress, as an English Missionary Clergyman had established there a Lancasterian School of 300 pupils.

The town of Mendoza in municipal matters is governed by a cabildo, a body chosen by electors, who are chosen by the people. We walked to the alameda, the pride and ornament of Mendoza; this is a fine level straight walk, said to be three-fourths of a mile long, and thirty feet broad, having on each side a double row of very large and beautiful poplar trees, which are irrigated by a little channel of water

constantly running between them. Seats, built of burnt bricks and mortar, are placed on each side of the walk, at certain distances, and in the middle of the walk, at regular intervals, paper lanthorns are suspended by strings hung across from tree to tree; in each lanthorn a candle is placed every evening at the expense of the cabildo. One end of the walk is terminated by a little open Grecian temple, consisting of a neat frieze supported by many columns, the ascent to it being by a flight of steps facing the walk: the temple is built of brick and lime stuccoed in imitation of stone. At the opposite end of the walk another temple was building, but in a much heavier style. The walk is kept remarkably clean, and is much frequented by the inhabitants of the town every evening. During the day it is a place of delightful retreat, as the foliage of the tall trees forms a complete shade from the influence of the scorching sun. There is not, certainly, in all South America, any promenade comparable with the alameda of Mendoza.

On retiring to rest this night, I found myself worse tormented than before; my greatest patience and forbearance would not permit its endurance. I was obliged to rise and dress myself, and to sit up all night alternately writing, reading, and perambulating.

April 27.—I sallied forth at break of day towards the suburbs, and entered a house attached to a very extensive vineyard, and asked permission to enter, which was cheerfully granted by the owner, who took pleasure in showing me round his premises, and answering all my inquiries. His vine-

yard occupied an extent of about twenty acres; the vines were planted in parallel rows, about five feet asunder, the vines were five feet apart from each other in the rows: the main trunk of each vine was about the thickness of an ordinary man's leg, and five feet high; from the top issued four branches, two extending each way along horizontal poles supported upon vertical forked posts, planted at the foot of each vine. Every quadra, a measure of land 150 Spanish varas square on each side, nearly equal to four English acres, contained about 1500 vines, ten of which, on an average, yielded at every vintage an arroba (a measure of eight English gallons) of must, which, made into wine, was sold for two dollars, (eight shillings) the arroba. The grapes are all of the black kind; much of the produce had already been gathered, for it was now the midst of the vintage, and I observed six female slaves occupied in gathering the grapes, which they collected in baskets. The ground was irrigated by small channels between the rows of vines. The building was a ground story, and consisted of a warehouse of considerable length, twenty feet wide, the walls being constructed of mud bricks not whitewashed; here, other slaves were employed in pressing the grapes, which were brought in baskets and thrown upon sieves, the meshes of which were coarse enough to allow the fruit to pass through, while the husks and leaves remained behind: the fruit was crushed by treading with the feet, in reservoirs formed of burnt bricks and lime. The must thus obtained, was placed in large jars arranged close together on each side of the building; these jars are called tinacus, and are made from a red

ferruginous clay brought from the adjoining hills; the clay is kneaded and moulded into the required form, being afterwards baked in a pit made in the ground, into which fuel is thrown: the jars are then lined with mineral pitch, brought from the Cordillera, which communicates an unpleasant flavour to the wines prepared in them. The must having undergone the proper degree of fermentation, a wooden cover is placed over the mouth, which is closed by a lute of plastic clay, kneaded with bran. A certain quantity of wine is boiled down to a thick syrup, called cocido, which is added to the must previously to fermentation, and gives to it a strong empyreumatic, or bitter flavor, which it acquires by rapid boiling, and is well suited to the taste of the lower orders of gauchos, in the united provinces, especially those of the city of Buenos Ayres, among whom the wine of Mendoza finds the most extensive consumption; an astringent flavour is also given to suit the taste of the consumers, by adding a portion of aluminous earth. Some of the white wine, and some little of the red, prepared for family use in Mendoza, is excellent. With due attention to its preparation, this place might manufacture as fine wines as any in the world, and far more economically than in other wine countries of Europe.

After breakfast I went to deliver some letters I had brought from London to Don Juan de la Cruz Vargas, who held the situation of director of the post-office in this town. I was directed to his house in the suburbs, where he received me very kindly, and showed me every possible attention during my stay in Mendoza. I called upon General San Martin

to deliver letters I had also brought for him. While waiting to see him I entered into conversation with two of his aides-de-camp, from whom I learned the news of the attack of Lord Cochrane on Callao. The General received me very politely. He was a tall well-made man, very broad across the shoulders, and upright in his carriage; his complexion was sallow, and he possessed a remarkably sharp and penetrating eye; his hair was dark, and he had large whiskers. His address was quick and lively; his manners affable and polite: he offered me all the assistance I might require, and proffered a recommendatory letter to General O'Higgins, the supreme director of Chile, and invited me to his house in the evening.

During my absence from the inn, a singular incident occurred characteristic of the Mendozine women. The lady of the innkeeper had begged of my wife a quantity of her baby linen to show to the governor's lady; they were brought back by Mrs. Sarrazus, with an invitation from Mrs. Luzuriaga, begging she might have the pleasure of my wife's company to a tertulio (a friendly entertainment) in the evening, at which General San Martin would be present, concluding the message with a request to purchase the baby linen, or rather, what is generally understood by such a request, to have them offered as presents. My wife told her it was impossible she could part with those things for which she so shortly expected to have occasion, but added, that if the patterns could be of any use she was welcome to their use so long as she remained in Mendoza. About two hours afterwards Mrs. Sarrazus came over with a message from the Governor's lady to inform her with

much regret that the tertulio was put off, and hoped she would not be disappointed. The tertulio, however, was not put off. About dusk I was visited by Don Cruz Vargas, and Don Ildefonso Alvarez, the brother of the deputy whom I had known in London; he was one of San Martin's aides-de-camp: they both accompanied me to the General's, where I was received very politely. Our conversation was upon rockets, and other projectile military weapons, respecting which he made many anxious inquiries. After remaining with him about an hour, he begged to see me in the morning to give me the letter to General O'Higgins. Don Cruz Vargas remained to accompany the General to the Governor's tertulio, and Alvarez returned with me to the inn, where he passed the evening, amusing us with numerous tales of his adventures with the army of Belgrano in Upper Peru.

April 28.—I called this morning on General San Martin, and was introduced to him in his private study, where he was engaged with his secretary, whom he first caused to write a letter to General O'Higgins; he dictating the words as the other penned them. After signing it he handed it to me. While this was going forward I had an opportunity of surveying the place. The room was very neatly furnished in the European manner; the furniture was all English: he had handsome commodes, tables, &c. of rose-wood, inlaid with brass, neat chairs to match, and a Brussels carpet; but what more particularly excited my attention was a large miniature likeness of himself, hung up between prints of Napoleon Buonaparte

and Lord Wellington, all three being framed in a corresponding manner.

He took me into an adjoining small room, in one corner of which stood his bed. Opening a wardrobe he displayed about twenty very choice guns, rifles, and fowling pieces. I remained some time in conversation with him respecting the topography of the province of Cuyo. He took leave of me with much cordiality, again proffering his services, and saying he should soon have the pleasure of seeing me in Chile. I little thought at that time that I should afterwards become more intimately acquainted with a personage who was the chief actor in the subsequent and singular political events which I shall have to relate.

On my return to the inn I found Don Cruz Vargas, his wife Doña Rita, and Alvarez, who had called to pay us a visit; the lady insisted we should accompany them to breakfast, no excuse would be received: the Doña Rita took my wife with her in the calisa, a kind of open chaise drawn by a mule, upon which a black slave was mounted. We followed on foot to their house in the Cañada, where we found a large table laid out under a long alcove of vines: we here seated ourselves, and our hosts vied with each other as to who could show us the most attention. The dejeuné consisted of tea, coffee, fresh and dried grapes of several kinds, apples, peaches, eggs, boiled and poached, a roasted quiriquincho, (a variety of the armadillo, greatly esteemed by the natives), fowls, &c. We had besides, white and red wines, two, three, and four years old, the

produce of his vineyards. The alcove under which we were seated produced seven choice varieties of grapes. Our host took us over his garden; his fruit trees were numerous, mostly containing several grafts of the best and choicest fruits in the town: some of them produced seven different sorts of fruit upon one trunk; this in Mendoza is remarkable, since few persons here have any knowledge of the art of engrafting. I went over his vineyard, which covered an extent of ground of at least twenty acres; and afterwards visited the wine manufactory, in which the same processes were followed as in that I had seen the morning before, excepting, that in addition to the tinacas, he had large under-ground reservoirs, in which the juice of the grape was fermented. A number of slaves were employed in the preparation of raisins: the finest are hung in bunches upon sticks driven into walls which have a northern aspect, so as to receive the strongest rays of the sun; the great mass was left upon the roof of the house to dry. Throughout Mendoza, with few exceptions, the roofs of the houses consist merely of canes laid upon the rafters, and plastered over with mud: rain falls so seldom, is of such short duration, and in such small quantities, as to render this slight covering a sufficient protection in so genial a climate. The best houses in the town have azotca roofs, which are flat, and made with bricks put together with lime-mortar. No where did I perceive a tile in the town. Gratified with the attentions shown to us, we took leave to prepare for our departure in the afternoon.

On arriving at the inn, the muleteer was in readiness; but advised us by no means to think of starting,

as the clouds being gathered above the lofty peak of Tupungato indicated the falling of a snow storm in the Cordillera. I took the advice of Sarragas and Alvarez, who recommended me to wait the result of another day, that we might judge how the indication would terminate. I went to the Governor, obtained my passport, and subsequently to the custom-house, to renew the cocket for my luggage. In the afternoon Don Cruz Vargas sent two slaves loaded with presents of fruits, dried figs and raisins, biscuits, charqui, tongues, &c. for our journey. Alvarez remained with me all day, and at dinner we were joined by Mr. Halsey, a gentleman who had officiated as consul for the United States in Buenos Ayres, and lately in Chile, whence he was returning to the former place. He had but just arrived, and he depicted the passes of the Cordillera in the most terrific colors, enumerated all the dangerous places, and tried urgently to persuade my wife not to attempt so perilous a journey, assuring her that it would, if persevered in, cost her her life. She, however, had made up her mind to all consequences, armed with fortitude and perseverance enough to brave any dangers that a man could endure: she therefore turned a deaf ear to all entreaty. Don Cruz Vargas came in the evening, and spent several hours with us: he improved much on acquaintance, being a man of strong mind, and of more information than I expected to find in a Mendozino; his ideas relative to government were liberal; he was pretty well informed as to the nature of the government and institutions of England, as well as of the United States of North America; he seemed conversant with the affairs of

Europe, and expressed a decided preference in favor of Englishmen, on account of their liberal spirited enterprize, and their more general and superior education; he had made up his mind to send his children to England for instruction; and feeling sensible of the extreme backwardness of his townspeople in civilization, expressed his most anxious desire to forward, by every means in his power, the introduction of schools; the priesthood, he was aware, opposed a formidable impediment to so desirable a measure; and, conscious of this injurious influence, he was anxious for its destruction: he assured me that the most intelligent of the patriots were fully sensible of this impediment to their advancement. He described General San Martin as a determined friend to education; he had, he said, begun the work already in Mendoza; he had also begun to reform the church; had driven the monks from their convents, converted them into military barracks, and enlisted many monks in his service. These men afterwards proved most useful to him in his different expeditions. I was pleased with the liberality of the views of my new friend, and have since regretted that he has been banished from Mendoza in disgrace. He was the constant friend and companion of General San Martin. While in Mendoza he always spent his evenings with him over a bowl of punch, of which both were extremely fond. They were both unfortunately slaves to gambling, a vice to which Creoles are greatly addicted. I never could learn the cause of his disgrace: all I could hear was that it originated in a serious quarrel with General San Martin.

April 29.—I went to arrange accounts with Don Manuel Balanzuela, the principal merchant in the town, on whom I had letters of credit: he is a liberal minded and well-informed Mendozino, and is known to every Englishman who has passed through the town. He is partial to Englishmen, and takes pleasure in showing them all the attention in his power. His house is furnished in the English style; he has given up the habits of his townsmen, and has adopted, as nearly as possible, European manners and customs. The mules were to have been in readiness by eleven o'clock, but they did not arrive. Alvarez and Vargas were in readiness to assist us. The arriero did not make his appearance till five o'clock, and so much time was lost in loading the mules, that it was past six o'clock before we could start. All our friends crowded round us to bid us adieu—Sarrazas, Halsey, Balanzuela, Alvarez, all imploring my wife till the last moment, to change her resolution, and remain in Mendoza, and there await the period of her accouchement. A woman possessed of an unusual share of courage was not to be dissuaded from mere apprehension. I left the matter to her own choice, and she resolutely persevered in her determination. After great difficulties in arranging all the equipment of my large retinue, we mounted our several mules, and started with one of the most ludicrous cavalcades that had ever left Mendoza; a humorous painter would have relished the scene. It was dusk before we started, and we found it too late to perform our intention of bidding adieu to the Doña Rita, or the Cañada, which did not lie in our route. When about a mile

out of the heart of the town, passing down the long lane between the extensive plantations which form the suburbs, Matteo, the muleteer, stopped to arrange my wife's saddle, while I alighted to hold the reins of her mule, having shortly before passed by our fellow traveller, Mr. Ward, who had stopped for the same purpose. The doctor and my men had gone on, and were some distance a-head with the troop. While thus engaged, a mule passed us at full gallop. Matteo gave me the lasso by which he was leading my wife's mule, that he might proceed in search of the runaway animal, which proved to be Mr. Ward's. In doing this the lasso became entangled in my wife's feet, and I dismounted to release it, when my mule broke away from me, and set off after the others at a furious gallop. Mr. Ward now joined us on foot; telling us of his misfortune, he was in some degree consoled on learning what had happened to me: thus brothers in affliction, we trudged together on foot, I leading my wife's mule. We soon came to a boggy place, where the irrigating channel had burst its bounds, and flooded the road. Here we were obliged to wait, as it was now quite dark, until Matteo's return: he soon appeared, bringing with him Mr. Ward's mule, which had, in its flight, disencumbered itself of all its looser equipage, consisting of a plaid cloak, his pistols, a pair of chifles (horns for carrying wine), his alforjas (woollen saddle-bags, filled with various useful things). Another peon now joined us, who took charge of my wife's mule, while Matteo went off in search of my beast, and Mr. Ward's lost things. I had to mount behind Mr. Ward, and did not reach the place of Alizami-

ento, our resting-place, till nine o'clock at night. It was at a chaera, belonging to a relative of our Arriero Matteo Bera, situated on the outskirts, a league from the square of Mendoza. Matteo did not arrive till eleven o'clock; he had been fortunate enough to find all Mr. Ward's property, but he pretended, and I was then ignorant enough to believe it, that my mule had strayed into some chance pasture, where he would be sure to find it at dawn next morning. After amusing ourselves with our ludicrous adventures, we retired to rest. My wife found herself greatly fatigued with the jolting of the mule, and this was a sad presage of our tedious journey.

April 30.—Matteo was away before day-break, in search of my mule; he did not return till past noon, when he brought back the animal without a single article of his saddle trappings, English blankets, &c.; every thing was lost. Matteo was an arch rogue, for it turned out he had been in the town of Mendoza, where he had seen Mr. Burdon, who sent a message that he would certainly join our party over the Cordillera, and we might expect him at night. It was necessary to dispatch Matteo to the town, in order to purchase for me a new saddle equipage; no alternative remained but to await here till next morning, when it was promised we should start for the Cordillera. This was fortunate, inasmuch as it respected my wife, who had a good rest from yesterday's exertions. Seeing how ill calculated she was for bearing fatigue, I endeavoured to persuade her to return to Mendoza, but she was determined to run all risks rather than be left alone for

six months, a stranger in such a town as Mendoza. In the evening we were joined by Mr. Burdon, accompanied by Matteo, who brought me the requisite saddle equipage which cost me twenty dollars. Mr. Burdon brought the strongest reiterations of advice from our friends in Mendoza, to my wife, not to proceed; the subject was again canvassed, but she was resolute in her determination to attempt the passage of the central ridge of the Cordillera, so that if any disaster occurred, on the Chile side, she could be removed, in the event of her own inability to proceed. About ten o'clock an officer arrived, who had just come from Chile, on his way to Buenos Ayres: he gave us a very favourable account of the passage, having encountered no snow whatever on the road.

May 1.—We rose at day-break, in order to arrange matters, for the tedious journey before us, but so much time was lost in preparations, that we did not start till eight o'clock: we formed altogether a large cavalcade; my wife bore the first part of her journey much better than I could have anticipated, and increased my hopes that she would yet accomplish the arduous task she had undertaken. The road was very good for about five leagues, such as a carriage might have travelled without difficulty: beyond this distance the road was full of deep holes and rising ground, covered with numerous large and small stones, principally of black primitive lime-stone, clay slate, hornblende slate, and porphyry. We passed on the left the round hill called La Calera, from which the town of Mendoza

is supplied with lime. We continued a somewhat northern course, skirting the foot of a lofty mountain range, and arrived at a low detached range of hills, called Los Cerrillos; these we left on our right, and verging more to the westward, made towards an opening in the lofty range upon our left: our road still continued over the barren travesia which produces nothing but low thorny trees, such as the chañar, atamisque, retortuño, and balsamic bushes of different varieties, called jarillo; saline plants, called xumè, vidriera, &c., and several varieties of cactus. My wife kept up her spirits and proceeded with much cheerfulness, although she complained of fatigue. At the distance of ten leagues from Mendoza, we entered the mountain range, and two leagues farther were completely shut in by chains of hills of very steep ascent, covered with low trees and bushes, among which numbers of humming birds were playing. The scenery was novel to us; we were delighted at the variety of objects which struck our fancy at every step. We had hitherto been exposed to a broiling sun, but as we closed into the narrow winding valley, we found ourselves enveloped in a thick mist, which wetted our clothes as much as if we had encountered a shower of rain. As we proceeded, my wife grew more and more fatigued; but she kept up her spirits until within half a mile of Villa Vicencio, when she fainted upon her mule. We had just arrived at a small brook of water, the first met with all the way from Mendoza, a distance of forty five miles, a draught from this, with a little wine out of Mr. Burdon's chifles, gave her some strength, and we

walked our mules slowly till we reached the huts, when I laid her upon the postmaster's bed: after taking a little rest she recovered her former spirits. Meanwhile our companions were preparing dinner, and we now began to find our canteen extremely serviceable when it was necessary to become our own cooks. A small quantity of food and a little mulled wine restored my wife, and again led us to hope she would be able to accomplish the journey. While at dinner we were joined by a British naval officer just arrived from Chile, on his way to Buenos Ayres, and thence to Rio Janeiro, having been promoted from the Andromache frigate, and now about to join the Commodore at the latter station. His name was Franklin, he gave a good account of the state of the mountain passes, and the latest news from the opposite side. I put up our travelling bedstead for my wife, and made her as comfortable quarters as the postmaster's room admitted. I spread out my saddle traps, and made a bed upon the ground for myself; all our companions slept in a separate hut, which with difficulty could receive the whole of them when stretched out. It was half unroofed, had no door, and their close stowage under such circumstances only rendered them the warmer. My wife went to bed refreshed, and satisfied, now that she had accomplished so well the first day's journey, that she had strength enough to go through the fatigue of the remainder without apprehension. I could not sleep for the cold, there being no door to our room; the wind blew in uncomfortably, and though I was in my clothes, covered with blankets, and a large great coat, I could not make myself warm.

My wife slept very soundly all night, but about four in the morning of Sunday the 2d May, she complained of much pain—it increased, and I went to call the doctor; I had to stumble over and awake four or five of his companions before I could discover him. It was with the greatest difficulty I could rouse him, so soundly was he lost in sleep: when he recovered his senses he crawled out and followed me; the air was piercingly cold, and when the doctor came to my wife's bedside, his teeth chattered, and his whole frame so shivered with cold that he could with difficulty speak. He told me there was every symptom of approaching labour, and advised that my wife should remain quiet in the hope of its passing off. After day-break, as the symptoms had not ceased, and as Lieut. Franklin was preparing to start for Mendoza, I wrote a letter to Dr. Colesberry, informing him of our fears, and requesting him to send out a nurse, and a number of essential necessaries for our stay in this miserable place. I wrote likewise to Don Cruz Vargas, begging he would co-operate with Dr. Colesberry, and informed him that should our fears prove groundless, I was determined to convey my wife back to Mendoza.

Our situation was critical, and exceedingly embarrassing; we were now forty-five miles from any habitable spot, and the period had arrived when the mountains are usually rendered impassable by the snow which falls at this season of the year. It appeared absolutely necessary for me to return with my wife to Mendoza, if she should be in a state to undertake the journey; and this I feared would

cause such a delay as would detain me on the eastern side of the Cordillera until the mountains should again become passable, which seldom happens till the month of October or November, a period of six months. In this dilemma I resolved to send forward the artizans I had brought with me from England; with them I sent baggage, instruments, and every thing not absolutely necessary for our accommodation; and at half-past eight o'clock they set out with the muleteers.* This was considered by us all a very unfortunate circumstance. The men were going to a strange country, to remain without occupation, ignorant of the language, and without the controul so necessary under such circumstances: it appeared also probable, that I should remain equally unemployed, regretting the loss and delay which, although unavoidable, was not less distressing. These apprehensions were increased by the knowledge that a ship-load of heavy machinery would arrive at Valparaiso, which in my absence could not be landed.

The doctor alone remained with us. My wife continued in great suffering until about half-past two in the afternoon, when she was relieved from her trouble by the premature birth of my first boy (who is now in Chile with his mother, a friend and companion to her in her solitary retreat at Concon, during my present absence in England): the little

* Mr. Burdon and my principal engineer remained till eleven o'clock, expecting to know the result. Mr. Burdon insisted very kindly in leaving his pillow and part of his bedding behind, in hopes of its being useful.

infant, after laying patiently wrapped up above three hours on the postmaster's bed, was now washed and dressed by the doctor.

May 3.—The day was very fine and warm throughout; my wife was in excellent spirits, and was recovering better than we had had reason to anticipate in her disastrous situation. The man who kept these miserable huts was dignified with the name of postmaster. The possession belongs to a Mendozino, who breeds cattle and horses upon it; the duty of Antonio Fonseca, such was the postmaster's name, was to keep an eye upon the operation of strangers, that they did not steal the cattle, and to collect horses for travellers, who might choose to hire them, either to Uspallata or Mendoza. These huts are situated near the outlet of a glen, which opens into the main ravine, up which the usual road leads to the Paramillo, on the road to Uspallata, and down which the road leads into the plain of Mendoza. It is supplied by a little brook of continually running water, which has its rise at the head of the glen, in which are the hot springs elsewhere described. The width of the bottom of the glen at the huts is about 200 yards; in this bottom the brook runs in a deep hollow, ten feet beneath the level of the ground, in front of the huts; the banks are sloped on each side, so as to afford an easy access in crossing the brook. The ridge of hills fronting the post-house is perhaps 800 feet above its level; from the summit of this ridge there is a fine prospect of all the travesia and the plains of Mendoza. I never ascended during my stay here, not being able to leave my wife for so long a time, but the doctor did several times, and de-

scribed the view as beautiful: the cultivated environs of Mendoza appeared like a verdant island in the midst of a boundless sea; the travesia appearing from its uniform level, and its barren aspect, more like the ocean than land. The post-house, if it can be so called, consists of three huts, Fonseca's room, the kitchen, and the room where travellers sleep. Fonseca's hut was constructed of loose fragments of stone, piled loosely over each other, to form a wall: it consisted originally of two rooms, twenty-five feet long, one leading into the other; but all the covering, and great part of the roof itself of the larger room had disappeared, leaving only one small low cell of less than twelve feet square. In one corner of this stood Fonseca's bed, consisting of four short forked stakes driven into the ground, upon which four horizontal sticks were laid to make a frame; across these was stretched a bullock's hide, to support his bed, which consisted of about twenty guanacho and lion skins, and a few saddle-cloths. A table stood next to it with three common wine-bottles containing aguardiente, a crucifix, and a few wine glasses. On the floor stood two petacas, or hide-boxes, in which he kept bread or other saleable things for such passengers coming over the Cordillera as stood in need of provisions. There was only one door-way opening into the space that was formerly the larger room. As there was no door, I hung up a poncho as a substitute, and in order to make a separate chamber for my wife, I divided the cell by hanging up curtains from the roof made from our sheets. My own bed consisted of my saddle-cloths laid upon my two portmanteaus. The doctor made

his bed upon the two petacas of Fonseca. Such was the miserable accommodation which, in our peculiar and critical circumstances, we were obliged to put up with.

The kitchen was a small hut, situated between the other two, walled in on three sides with fragments of stone; the open end was in front, facing the brook; a log of wood, raised on stones above the ground, was placed along each side to serve for seats. The fire was lighted on the ground, in the middle, with brushwood. The room in which travellers are wont to sleep is constructed in a similar manner, but its roof is almost wholly gone to decay. Miserable as our accommodation was, it happened fortunately that our disaster occurred in so favourable a place of shelter. During the day several troops of mules passed—some bound to Chile, others to Mendoza. In the evening arrived, on their way to Chile, a French fencing master, going to join the patriot army, and a Cordovese farmer, from Calamuchita, who, in former times, had quartered on him several of the prisoners belonging to General Beresford's army.

May 4.—The whole of this day was foggy, very rainy, and excessively cold. My wife was recovering her strength rapidly. About noon we were visited by a swaggering fellow, on his way from Chile to Mendoza; he was named Martinez, and was a lieutenant in the 1st Cazadores de los Andes: he had his wife with him. He very soon disgusted me with his recitals; for, by his own account, it appeared he was the Spanish miscreant, serjeant of the troops bound from Spain to Peru, in the trans-

port called La Trinidad, who, assisted by another desperate character, fastened down the hatchways, and murdered all the officers as they came on deck. He seemed to feel pride in recounting his barbarity, boasting of having murdered, with his own hands, thirteen officers. There were on board 220 soldiers, and 100 sailors, who joined him in the mutiny: they carried the vessel to Buenos Ayres, where they were all hailed as patriots, and distributed through the patriot ranks, the greater part being made subaltern officers; Martinez was at once made a lieutenant, in recompence of his bloody misdeeds. He had left one wife, he said, in Buenos Ayres: his present frail companion he had picked up in Chile.

May 5.—The weather, to our disappointment, grew worse; it was now a serious temporal, or snow storm; a great deal of sleet fell in the morning, mixed with rain; but by three o'clock it snowed so heavily, that before sun-set, the snow on the ground was above two inches in thickness. I was greatly disappointed at not having heard either from Dr. Colesberry, or Don Vargas, in reply to my very urgent request. I therefore dispatched Fonseca's peon to Mendoza, with a letter to Dr. Colesberry, begging him to send a female assistant without delay, together with a supply of bread and meat, of which we were deficient, with some arrow root, and several other essential articles. I wrote also to Don Cruz Vargas to the same effect. Notwithstanding the severity of the weather, the doctor and I were obliged to do the office of washerwomen. We repaired to the brook with a few things for present use; these were dried over the smoky fire in the kitchen; the water of

the brook was at this time at the freezing point; and the mountains in every direction were completely covered with snow. In the evening we were visited by a patriot officer, on his way to Chile, Lieutenant Colonel Torres, a very intelligent and agreeable Creole, who spoke both English and French pretty fluently: he had been in the United States of North America; he greatly amused us with his cheerful and intelligent conversation in such a solitude, and was particularly welcome. He described the gauchos of Buenos Ayres and the guasos of Chile as making the best and hardiest soldiers in the world: for campaigning and actual service no troops could equal them; no others, he said, could endure the fatigue and bear the privations to which they had been accustomed from their birth: they were brave and easily disciplined, and when led by able and courageous officers, no Europeans could withstand them. The great difficulty in forming patriot troops was the finding competent officers. These soldiers were beings who cared little for money, and not much for the quality of their food, the want of which was not felt as a hardship, provided they had but a supply of the Paraguay tea, and a few segars: furnished with these they would endure cheerfully all other privations: they were hardy beyond comparison; cavalry soldiers had their saddles always for beds; but infantry soldiers, who could have none in campaign, could as cheerfully sleep in the other air upon the bare ground, with a hide beneath them, and a poncho over them: they never cared for bread, which they seldom touched; a little beef, half raw, was sufficient to satisfy the cravings

of appetite; no nicety was requisite in cooking; every thing edible was alike to them. He had served with the British army in Spain, and he described our hardiest veterans, at the time of their greatest privation, as pampered, when compared with the soldiers of South America.

Colonel Torres insisted upon leaving a portion of bread and beef with us, which we were glad to accept, having exhausted our stock of provisions. In the night there occurred a heavy storm of thunder, lightning, and hail. We had discovered, when it rained during the previous morning, that our roof was far from water-tight, but in the night the rain poured in upon us in torrents: it fell upon my wife as she lay on her mattrass with the infant, notwithstanding she was placed in the driest part of the room. This was exceedingly distressing, and in our anguish we attempted all that our means afforded to turn off the falling rain from the bed. Assisted by the postmaster, who arose from his miserable birth, and gave some of the skins which formed his bed, the doctor and I made a sort of pent over the bedstead with them; and thus in great measure prevented the wet from falling on the bed. Our condition was however very wretched.

May 6.—The morning was very foggy, and extremely cold; the mountains were all covered with snow, which had also fallen on the narrow spot of ground before us, to the depth of four inches; the walls of the huts were glazed with a frozen coating. Shut in, as we were by the mountains, the whole presented to us a most uncomfortable and dreary appearance. Having sent forward my instruments,

I could not ascertain the degree of cold, but I never remember to have experienced more severe cold. About noon the atmosphere began to clear, and in the afternoon the sky was completely freed from clouds: the doctor and I performed a more extensive washing of clothes in the brook, which were soon dried when the afternoon's sun appeared. Notwithstanding the discomfort and inconvenience to which we were subjected, my wife's fortitude never forsook her—she was cheerful, and was fast recovering: she had indeed regained so much strength, that she sat up several hours: her appetite was good, but to my mortification there was nothing but mouldy bread, at least a month old; dried tongue, hung beef, and tea without milk; this was all we could give her. We were gratified on hearing Fonseca announce the approach of the peon from Mendoza, but judge of our mortification on finding he had returned without provisions. Don Cruz Vargas was absent at his farm at Luxan, fifteen miles to the southward of Mendoza, and because the stupid messenger did not find Doctor Colesberry at home when he called, he came back with my letter in his hand, without leaving even a message. I would instantly have set off to Mendoza, but it was impossible for me to leave my wife; she could not have done without me constantly at her side. No alternative remained but to endure the mortification, and to send back the messenger at the dawn of next day.

May 7.—Rising early in the morning, I dispatched the peon a second time to Doctor Colesberry, strongly cautioning him not to return without a female, and

the necessaries we stood so greatly in need of. The postmaster set out on horseback with his lasso and his balls in hopes of finding a calf or a guanaco, to supply us with some fresh meat. He went attended by his two dogs. My wife was very much indisposed this morning; she continued to grow worse, and to exhibit evident signs of fever: to add to our misfortune the sacking of her bedstead broke; having got damp on board ship, it had become rotten: she was removed upon Fonseca's bed while we sewed up the sacking as well as we could with some common sewing thread, the only material at our command. She was then removed to her bed, which again broke down. The invalid was once more removed to the postmaster's bed; while we contrived to repair hers with a saddle-cloth.

The day was extremely fine; the sun shone brightly, but the air continued excessively cold; the thaw was constant, though the snow disappeared very slowly. In the afternoon the postmaster returned with a long face, not having been able to catch an animal of any sort. During the night, the fever of our invalid increased; she became restless and unable to sleep: that which threatened a still worse calamity was the gradual disappearance of her milk, in which case no substitute could have been found for the infant. To add to our alarm, we could not preserve a light; our store of candles in the canteen was exhausted: I made a lamp from all the grease I could collect, and placed it in the shell of a calabash, with a piece of cotton; but this frequently choked up, as the tallow became frozen from the extreme cold of the night air, and it went out. In

order to keep the feeble light as much as possible from the eyes of the invalid, I stuck the shell on a projecting stone in the wall, but the wind blowing through the chinks constantly put out our delicate lamp. These were but a few of the annoyances we had to encounter in this period of difficulty and danger.

May 8.—The rainy weather returned, and the snow fell abundantly upon the surrounding hills. During the day there was an interval of fine weather, but towards night the rain and snow returned with more fury than ever. Nothing could well exceed our miserable situation at this period.

It might be supposed that the several persons who had passed through Villa Vicencio, and knew how we were circumstanced, would, one after another, have related those circumstances at Mendoza, and that persons would have been found willing enough to come to our assistance, without waiting to be requested, and this most assuredly would have been the case in any part of Europe; but in these parts of South America no one ever puts himself or herself out of the way merely to do a service to another; and here we might have remained and perished before any of the good people of Mendoza would voluntarily have come to our assistance, even if they had known that that assistance alone would have saved us.

Our patient was not worse, though she had no relief from the fever: I was not then aware of the nature of her disorder; it seems to have been the puerperal fever, from which nine out of ten of those attacked with it even in England fall a sacrifice.

It was with difficulty that sufficient support could be given to the infant, and I looked with extreme anxiety for the return of the peon from Mendoza.

May 9.—The day was fine, but the hills and objects around presented a very winterly appearance; our patient was considerably better this morning. About noon rain again began to fall, and the air became much colder. In the evening the peon arrived, bringing a woman and her husband, together with the necessaries of which we so greatly stood in need. Our friends had made a mistake in sending a wet-nurse. Dr. Colesberry made every exertion to procure one, which, under the antipathy which the Mendozine women have to hire themselves for any sort of employment, much less to come forty-five miles into the mountains to a stranger, was effected with great difficulty: General San Martin, it appears, interested himself on this occasion, and prevailed upon the woman to go; and but for this she would not have come at all. By a wet-nurse we must not imagine a fine healthy young woman, neat and cleanly, and willing to offer her services, but a dirty-looking woman, with her head and part of her face muffled up in a woollen rebosa (or shawl), whose only care on her arrival was to sit by the kitchen-fire to sip a maté. On the sight of the nurse, my wife resolved not to let her suckle the child. I insisted upon it for her sake, and with difficulty could procure the infant to give it to the nurse; the agitation of our invalid increased the fever.

May 10 and 11.—The invalid improved very slowly. The woman was of no use whatever but to suckle the child; both she and her husband were

proud, dirty, and lazy, unwilling to assist in any thing whatever; had not my wife's illness rendered the woman useful to support the infant, we should have done much better without her.

May 12.—The weather still continued very foggy and cold; in the afternoon we had violent squalls of wind from the south, which brought a hot burning air. This place must be very unhealthy for constant residence, on account of the sudden changes from extreme cold to heat, and from heat to cold.

May 13.—I had written to Dr. Colesberry to hire and send out ten peons from Mendoza for the purpose of carrying back my wife to that place; and difficult and dangerous as this mode necessarily was, of conveying a person in her state with the child forty-five miles over a bad and rugged road, still it was the only possible way of getting her there. Dr. Colesberry hired that number at the rate of two dollars, or eight shillings each man per day. This was a most exorbitant charge, since not one of these men, even when he could obtain employment in Mendoza, would have been paid more than half a dollar or two shillings a day. But even this high pay was insufficient to induce them to perform the labour they had undertaken; for such is the antipathy of these people, such their notions of the hardships and degradation of walking on foot, that only six of the ten arrived at Villa Vicencio, for notwithstanding they set out on horseback, the dread of having to return on foot was such that four of them, after having rode about half-way, returned home again; the others arrived this afternoon.

To have sent for fresh hands would have caused

a longer detention than we were willing to endure, and it was therefore resolved to move forward as soon as possible.

May 14.—By the peons who arrived yesterday we received from Mendoza a quarter of beef for the maintenance of our numerous retinue: it was hung up to the ridge tree of the roof in the hovel outside our room. A Guanaco hunter proceeding into the Cordillera with a kennel of hungry hounds, put up in a resting-place in the hills at no great distance from us. The dogs during the night made a strolling visit to our neighbourhood, when, to our misfortune, they discovered our beef, and totally devoured it: our mortification can hardly be described; we had fortunately a small piece left of the stock brought with the nurse, it was a piece of shin, and had been stowed in a safer place; the utmost economy was therefore requisite, having so many persons to maintain. The peons employed themselves during the day in cutting sticks and making a litter for our invalid. I packed up all our luggage, and prepared every thing for an early departure on the following morning.

May 15.—I rose at half-past two, to call up the peons, intending they should start at break of day, so as to reach Mendoza that night if possible. I sent away the men by three o'clock to collect and bring up the horses and mules which were grazing in the hills. By four o'clock my wife had dressed herself, had breakfasted, and had been removed to the litter intended for her conveyance, in the momentary expectation of the arrival of the peons, but they did not appear, and at half past six I sent the

postmaster in search of them; he brought them back at half past seven, making many excuses about the difficulty of finding the horses. They now took their breakfast, and I observed among them much sullenness of manner, and backwardness in moving. The horses being all saddled and the baggage loaded by half past eight, the peons came in a body and refused to proceed to Mendoza with the litter unless two more hands were first obtained, and they had an additional grant of ten dollars (forty shillings each). Irritated by their conduct I dismissed them all, and the doctor and I started alone, carrying the litter in our hands by means of poles, in a similar manner to that in which a sedan chair is carried. It now only wanted twenty minutes to ten o'clock. We had not proceeded 200 yards when two of the peons followed us, offering to accede to the terms originally agreed upon. We carried the litter, however, for about a mile over the rugged stony path, when we resigned our load to the two peons. Fonseca and his peon followed with the luggage, together with the woman and her husband on horseback, and we trudged along under the heat of a burning sun and a sultry atmosphere. Having proceeded another mile three other peons came to offer their services, and I was glad enough to avail myself of their assistance. The sixth peon never appeared, but rode off silently and alone to Mendoza. It was found a hard task to bear the litter between two persons, and it was agreed that four should carry the load upon their shoulders. By one o'clock we had quitted the narrow part of the valley, and the extensive desert plain was now in view before us; our descent

had been pretty rapid, and our progress much faster than we could afterwards contrive to keep up. We rested here to partake of a hasty meal; a fire was lighted—our little store of beef was spitted upon the postmaster's sword, the point of which was stuck into the ground in a slanting direction, so as to keep the meat at a proper distance from the embers: being roasted it was equally divided among all; its scantiness rendered it acceptable, notwithstanding it was hard and sinewy. I made some rice broth for my wife, who bore her journey with fortitude and patience. In order to relieve the peons, the doctor and I took our turns with them in carrying the litter; the husband of the woman made one attempt in the course of the day to assist us, but he so much disliked the task that he gave it up in five minutes, and never again offered his services. Fonseca occasionally rendered his assistance, and often relieved us of our fatigue. We continued to trudge over this sandy barren plain, under a burning sun, and a stony and fatiguing road, four persons relieving the others in succession every half league.

We thus continued our toilsome and wearisome journey, till it became so dark that it was dangerous to proceed on the broken road; it was therefore determined we should rest till the moon rose, by whose light we might proceed in safety: we had not yet moved over two thirds of our distance. A fire was therefore lighted close to the litter, and we seated ourselves around it to rest our wearied limbs. The dew fell so heavily that the sheet which formed the curtain or covering of the litter was wetted as if it had been dipped in water. I lighted

another fire on the opposite side of the litter, keeping up a constant blaze in both heaps. I made some tea with the water we had brought from Villa Vicencio, for it is to be remembered that between this place and Mendoza, a distance of forty-five miles, not the least drop is to be met with. Our peons took their mattè, and each laid down to sleep till the moon rose, which happened at eleven o'clock, when I made all get up, and we proceeded on our journey. We trudged onward with our load, taking our charge in succession. We travelled all night: about four o'clock in the morning I became quite exhausted; both my shoulders were so tender, and the skin rubbed off by the weight and friction of the shafts of the load, that I was forced to give in: however anxious to do my utmost, my strength would no longer allow me to perform my share of the labour, and when it came to my turn, I sunk under my load: the doctor, however, continued to render his assistance to the last; his frame was stronger, and he was better adapted to sustain fatigue than I was.

About half past four we fancied we could hear the barking of dogs, a conviction that struck new joy, and infused fresh vigour into us all. As we advanced we distinctly heard the crowing of cocks, announcing the approach of dawn, and this confirmed our joyous anticipations. As the approach of day cast a faint gleam of light upon the horizon, we could perceive the reality of those shadows which our fancies had pictured in the feeble light of the moon. At length we distinguished the trees and church steeples of Mendoza: the gradual developement of these hopes,

excited the most pleasant and agreeable sensations I ever remember to have experienced. We trudged on with light hearts till we reached the house of the relative of Bera, our Arriero, when we stopped on our departure from Mendoza: here we rested awhile, took a mattè, and again set off at seven o'clock, proceeding half a league through the suburbs till we reached the house of a man called Zapata, a friend of Fonseca's: here we were received kindly, and partook of a hearty breakfast, with which we found ourselves greatly refreshed. Our invalid was not at all indisposed by the journey, which was performed in twenty-two hours.

Here I discharged the peons, and as I considered myself under great obligations to the postmaster, Fonseca, I presented him with my silver watch.

Our extraordinary procession excited no particular sensation among the people as we passed through the suburbs of Mendoza; no one offered us any assistance; none showed any curiosity, not even so much as to induce any of them even to look at us. Leaving the doctor to refresh himself by a sound repose, I set off into the town of Mendoza to make arrangements and procure a suitable residence for my wife. I reached the house of Don Cruz Vargas by one o'clock, whom I found at dinner. After partaking of his hospitable fare, he and his wife insisted upon my bringing my wife to his house until proper accommodation could be provided for her in another place.

Cruz Vargas and I set off to the Governor's, and in our way called at the post-office, where he had some business to transact: here I seated myself in

an arm chair, with a high back to it, a luxury which I had not enjoyed for a long time; worn out with fatigue and want of rest I instantly fell into a profound sleep, in which I remained till about six o'clock in the evening, when I was awoke by my friend who was about to lock up his office.

It was now too late to do any business, and was dark before I could reach the house of Vargas. My horse had strayed into his vineyard, and much time was lost in seeking it, so that I did not arrive at the house of Zapata till near ten o'clock.

May 17.—This morning I walked into Mendoza, where I met Alvarez, who offered me all the assistance in his power. We called on the Governor, who conceded me the requisite passport for my journey, as my former passport had been given to the men who had proceeded on to Chile. After calling on several friends, and transacting other business, we returned to the house of Don Cruz Vargas, who, with his wife, again pressed me to remove the invalid to his house. I waited all the day for the calisa, which was offered to convey her. Night came, when the Doña Rita told me she should have the pleasure of going herself to fetch her the next morning. While in the town I met with an Arriero, who agreed to provide us with the necessary mules, and to conduct the doctor, myself, and our baggage, to Santiago de Chile for thirty-six dollars, that is, twelve dollars for each mule: as the season was far advanced, and much snow had fallen, this was considered a very reasonable charge.

May 18.—I again walked into Mendoza, and repaired to the house of Vargas; but seeing nothing

of the promised preparation on the part of the Doña Rita, I begged I might go and bring my wife to the house at once. The calisa was then brought out, and I went in it to the house of Zapata, where my wife was lodged. I returned with her, accompanied by the doctor, to the house of Don Cruz Vargas, where we arrived in the evening. In the meanwhile Alvarez and Don Pedro Vargas, a brother of our friend, busied themselves in fitting up a bedstead, and preparing a room for my wife's reception. Don Cruz Vargas was pressing in his offers of assistance, and insisted upon my leaving my wife under the care of the Doña Rita, during her stay in Mendoza, a proposition which I could by no means consent to: I did not then so well understand the Spanish character of dissimulation and ostentation. I was extremely backward in accepting these offers, but they were pressed with such apparent sincerity and earnestness that I fancied I could not refuse them without wounding their feelings: their urgent civilities were, however, intended only as offers of politeness which it was not expected we should accept. We discovered long afterwards from Alvarez that the Doña Rita was highly enraged at her husband for his civilities to us: he had been overruled at length by his wife, and had I brought in the invalid without first going for the calisa, we should have found the door shut against us, notwithstanding their repeated solicitations, which I found it impossible to refuse; Don Pedro Vargas and Alvarez however insisted upon the Doña Rita receiving us, especially as they had so urgently forced the invitation upon us, but this was unknown to us. We

were received with apparent kindness by the Doña Rita and Don Cruz Vargas, and took possession of the room allotted: we thought nothing of the absence of comforts from which we had been long estranged; a bedstead was put up, but no matrass was offered—a hide only was laid on it, upon which our own small matrass was stretched for my wife, while I contented myself by lyeing upon the bare hide on the floor; the doctor found an old sopha for his bed, and we all slept soundly.

May 19.—This morning I visited, in company with Don Cruz Vargas and Alvarez, some of the principal houses in Mendoza, in search of a family with whom I might lodge my wife during my long expected absence: this was evidently the better course, ignorant as we were of the manners and customs of the country, and incompetent as she would have been to have managed a house alone. I was not aware of the circumstances which then operated against the reception into their circles, of a female and a foreigner placed among them, under circumstances that we should have expected would have called forth their sympathy, and have excited a degree of emulation as to who should have been most forward in rendering her the benefit of their assistance and kindness. These causes will appear in the sequel: it happened, however, most fortunately, that I found in the cañada, within three doors of the Doña Rita, an asylum: this was at the suggestion of Alvarez, after our return from the town, on which occasion both Vargas and he seemed completely enraged against their countrywomen for re-

fusing to receive my wife. It was agreed, therefore, that in the evening I should place her in the house alluded to, belonging to a widow named Ricabaron, who had been once in affluent circumstances; the family was very respectable, and allied to one of the first houses in Chile: her husband had been in the army, and died some years ago, leaving her a young widow, with her present family, who had now all grown up: it consisted of three daughters and a son; another son, who was in the army, had been killed in the action of Maypo. The house was small, but it had a vineyard of some extent attached to it, on the produce of which, and upon their industry, they supported themselves genteelly, but being in reduced circumstances, and without the proper number of slaves to make her *respectable*, she was neglected by the principal families with whom she had been intimate under a better fortune. The principal occupation of the girls was the manufacture of military sashes and flags for the army then under equipment; in this occupation they greatly excelled, the mother being an admirable dyer, preparing her durable and brilliant colours, principally from indigenous plants and flowers. They were very amiable and well-disposed girls; and during the six months that my wife remained among them, she noticed nothing that was improper; their conversation, at first lax, after the fashion of the country, was instantly curbed as soon as it was stated by their visitor to be improper; they displayed every anxiety to conform themselves to European habits of cleanliness, which was in great measure introduced among

them; they seemed grateful for the instruction my wife gave them in many useful matters, and both mother and daughters vied with each other who could display towards her the most attention. It was fortunate that she was placed in so comfortable a situation, which, from its complete retirement, was well adapted to her wishes. During her stay there, she was visited by none, nor did she call upon any of the leading families in the town; the reasons for this will in great measure appear in the sequel, although the Mendozine women have since attempted to excuse themselves on the score of her living with the family of the Ricabarons, against whom they were at no loss to find imputations after their change of fortune. I allude to these circumstances merely as illustrative of the character of the Mendozinos. I took leave this evening of my excellent and kind friend Dr. Colesberry, who congratulated me on having found so admirable an asylum for my wife, and during my absence he was unremitting in his friendly attentions to her. With many grateful feelings I took leave of my friends, Vargas and Alvarez, and prepared to set off for Chile.

May 20.—Early this morning, in company with my old companion the doctor and the muleteer, I set out on my journey. We were joined in the suburbs by a sort of renegade officer, a major in the Patriot service, and his military servant. We slept that night in my old quarters in Villa Vicencio—next day at Uspallata—the third day at Peñon Raxado—the fourth at Las Leñas. On the fifth day, May 24, we passed the Cumbre, or highest ridge of the Andes, which here attains an elevation of about 12,000 feet,

all the snow that had fallen during our long stay at Villa Vicencio, had entirely disappeared from the natural heat of the mountain, so long exposed to the influence of the vernal and autumnal sun. When we arrived at Las Cuevas, the sight of a small cloud floating through the azure sky, excited great apprehension on the part of the major and our arriero, as the indication of an approaching temporal or snow storm; we met, however, with nothing but the finest weather during our whole journey; the heat of the day was burning, while at night the thermometer must have stood near the freezing point, from the hoar frost visible upon every object in the morning. On the sixth we arrived in Aconcagua, where, owing to the manœuvring of the arriero, I was delayed great part of the following day, by nine o'clock on the morning of the eighth day we reached the capital of Chile, where I found my men anxiously awaiting my arrival.—The particulars of this journey, and a description of this mountainous range which I have crossed four times, will form the subject of two separate chapters.

CHAPTER IV.

ARECO TO BARRANQUITOS.

Areco to Barranquitos by the Post Road.—Montoneros.—Indians.—Native Creoles.—Face of the Country.—Locusts.—Harvest Home.

HAVING described the post road from Buenos Ayres to Areco, I shall now proceed to describe the post road from Areco to Barranquitos.

The distance from Areco to the Chacras de Ayala is five leagues; the road is good, the country extremely level, and presents nothing remarkable: the post-house was abandoned, and we exchanged horses at a miserable rancho, kept by an old man living about a mile off. Nothing can exceed the misery here displayed; there was not a female about the place; there was neither bench nor stool to sit upon nor bed place, the bare ground answering the purpose of both; a quantity of maize in one heap, a pile of onions in another, a number of hides occupied another part of the floor, and some pieces of beef were suspended from the roof. The hut itself was small and thatched with grass; there was no door; the walls were formed of posts stuck at distant intervals into the ground, the spaces between them were wattled with canes and plastered with mud, yet the miserable inmate was the proprietor of nearly 300 horses, and a number of cattle.

The post-house of Arecifè, seven leagues from the Chacras de Ayala, is a miserable habitation on the western bank of a rivulet, which falls into the Parana: this rivulet is nearly dry during the greater part of the year, but in the rainy season it is unfordable, when it can be crossed only in canoes, brought from the Parana here as at all the other rivulets: we saw the Tosca formation. The soil is about a foot deep, under this lies the Tosca, which extends in a stratum of variable but considerable thickness throughout the province of Buenos Ayres.

Eight leagues from the Chacras de Ayala is the post-house of Fontezuelas; this stage is a plain level uninteresting country, over which numerous herds of cattle roam; there is not a single habitation on this vast plain excepting the wretched solitary hut of the postmaster.

Hence to the Canada de Gomez, four leagues; the road leads through the same Pampa country, which produces abundant pasture of trefoil and thistles.

The next post-house is called Arroya del Enmedio, from the rivulet on which it is built; this rivulet forms the boundary line which separates the provinces of Buenos Ayres and Santa Fè. The house is built of brick, it is five leagues from Canada de Gomez, and is kept by a very obliging man, who possesses an excellent stud of horses.

At every short interval, even to the extreme limits of the province of Buenos Ayres, we see large herds of cattle grazing, but after having passed the rivulet of the Arroyo del Enmedio, we no longer see any cattle; the contrast is remarkable, for the province

of Santa Fè was formerly the best stocked with cattle of any of the provinces: it is one of the best watered, and has the finest grazing lands; but, owing to the civil wars in which it has been engaged with all the surrounding provinces, against Artigas, against and in favour of the several partizans of Buenos Ayres, against Cordova, in favour of Carrera, and to the incursions of the Indians, plundered alike by friends and foes, the immense herds of cattle which once graced these beautiful plains have been exterminated. Since the restoration of internal order and of public tranquillity, from its being better governed, and from the security afforded to private property, Buenos Ayres has recovered as large a stock of cattle as it ever possessed. Cordova is re-establishing its herds by slow degrees, but Santa Fè, from the insecurity which still prevails, is destitute of cattle. Many estancieros or families of farmers have endeavoured to re-establish the breeding of cattle upon their estates, but such is the inefficiency of its government, such the roving, thievish, and daring habits of the people, that no sooner is a herd of cattle introduced than it disappears, notwithstanding the precautions taken to prevent robbery; the people of Santa Fè therefore subsist for the most part upon the flesh of mules and mares, the former being esteemed the most delicate food.

The distance from Arroyo del Enmedio to Arroyo del Pavon is eight leagues; the post-house is a small brick building, almost in ruins through neglect. The postmaster is an old niggard, and has nothing to afford the traveller except his most miserable horses.

The next post-house at the Arroyuelo del Sauçe, is at present deserted and destroyed; a temporary post has therefore been established at the distance of a league, at an estancia, called the cerrillo, which is eight leagues from the Arroyo del Pavon: the proprietor is a most obliging, hospitable, jolly fellow, his miserable rancho is well stored with eatables and potables; he has excellent horses. and the best disposition to afford all possible accommodation and dispatch.

Hence to the Manantiales or Orqueza, is a distance of six leagues, it is the estancia of Juance Gomez. Here formerly existed one of the best post-houses upon the road; it was, however, totally destroyed in the month of March, 1824, by an incursion of the Indians, who not only robbed the estate of all its horses, but pillaged the houses and set them on fire; the walls are yet remaining. The postmaster is a most obliging man, who, if he cannot afford accommodation, it is not for want of disposition to do so: he showed me a lance which the Indians left behind them; it was eighteen feet long, made of the chileno, or araucano cane, called colini; the cane is solid, very strong, very light, very straight, and slightly tapering, not at all fragile in the joints, the articulations being scarcely perceptible: a two-edged iron blade, one inch broad, projected eight inches beyond the point to which it was securely fastened by a piece of colt's skin lashed round by thongs, very neatly sewed and plaited. In the use of the lance the Indians are very expert, they use no stirrup or support for it, but with their arm hanging downwards, they hold it

loosely balanced in their right hand, they gallop at full speed towards their object, and when about twelve feet distance thrust the point forward, never failing in their aim; the lance is never projected beyond the balance, at which it may be recovered; on making the thrust, the weapon is grasped firmly by the hand, and is quickly withdrawn, the horse is then wheeled round, and the rider quickly again bears upon such of the victims as have escaped his blows: at first a discharge from fire-arms never failed to put the Indians to flight, but many Spaniards having taken refuge among them, and a great many tribes having assisted Carrera and other partizans against the armed Creoles, they have learned to withstand the shocks that formerly terrified them. As they now comprehend that a gun once discharged is useless until again loaded, they skirmish about till they observe the pieces discharged, when they immediately rush upon their enemies, and seldom fail to destroy them at close quarters. The Indians are a most cowardly race, only equalled by the Creoles, who are afraid to encounter them: of late years they have generally put to flight the troops that have been sent against them: the peasantry and native militia have not courage to withstand them, success has therefore emboldened them, and their inroads are more frequent and more successful than they were formerly. The Buenos Ayres soldiers alone are beginning to learn the mode of putting the Indians to flight; they trust not to fire-arms, but place their sole reliance upon the sabre; in charging them, a dextrous

motion of the sword will turn aside the thrust of an Indian lance, while the next moment the troops are placed in the most favourable situation for cutting down the Indians who have attacked them. In all instances where the soldiery have met an attack of the Indians with courage, sabre in hand, they have never failed to rout them completely.

The Indians generally appear in troops, of from 50 to 200; they approach an estancia about break of day, or in the afternoon, at siesta time, when they think the people will be the least prepared to resist them; if they can carry off the cattle and horses they seldom enter the houses, but whenever they do, they carry off or destroy every thing, kill the children, the old people, and all but the good looking women, whom they esteem their greatest prizes. They seldom make their attacks at any other time, and as they understand the country well, they contrive by moving out of sight of the far distant cottages, to proceed hundreds of leagues without exciting any alarm. The estancieros are now beginning to inclose their houses with deep ditches sufficiently large to contain all their cattle and horses; and, by keeping their animals as much as possible in the immediate neighbourhood, they have a better chance of driving them into the inclosure upon the first alarm. The Indians are too cowardly to attempt forcing any place into which they cannot enter on horseback; they, however, endeavour to approach unobserved by stratagem; they will sling themselves beneath the bellies of their horses, clinging one leg over their saddles, and ad-

vance at a slow pace, as if a herd of baguales or wild horses were grazing in the neighbourhood, as is frequently observed: when they consider themselves sufficiently near to prevent the recovery of the cattle, with a loud yell they in an instant recover their seats, and advancing at a full gallop, seldom fail in carrying off their booty.

The next stage is to Candelaria, where formerly existed one of the best post-houses on the road; the postmaster, named Gallego, still lives here; his house has no door, and is unroofed; he lives without his family or servants, in the most miserable manner that can be conceived, fearing to repair his house, lest the Indians should again be induced to pay him a visit: they attacked him at the same time they destroyed Orquita, but he succeeded in escaping, with the greater part of his horses, when the savages, disappointed, revenged themselves upon the defenceless houses. The brick walls of the building still remain. The postmaster is of an obliging disposition, and provides excellent horses.

The next post is that of Desmochadez, kept by Nicholas Gallego, the brother of the postmaster at Candelaria; he has an excellent brick house, surrounded with a good garden and orchard, enclosed by a ditch surmounted by a fence of cactus or torch thistle. The post-house, which is outside the fence, is only a tolerable rancho: though good accommodation is here afforded; it is distant five leagues from Candelaria.

Proceeding another four leagues we reach Arequito, a very miserable hut, enclosed by a ditch and cactus fence. It has nothing to deserve the notice of the

traveller excepting its filthiness, its sulky postmaster, and bad horses.

At the distance of four leagues from Arequito is Esquina de la Guardia. Here is one of the forts built by the government of Santa Fè, to protect the province from the Indians of the southern pampas: it is called a fortin, which may seem to imply a regularly built fortress, surmounted with cannon; but it has a different meaning when used by these people. The fortin of the Esquina is only a field fortification, a square inclosed by a ditch, the excavated earth forming a roundish bank; the inside is closely planted with tall cactus, which serves as a fence: the ditch is about seven feet wide, and five feet deep: the square it encloses is about seventy yards on each side. In this square are a few huts for about a dozen soldiers who are stationed here; formerly the place possessed a small gun or two, but these have been taken away. On the outside of this fort are from twenty to thirty miserable looking huts, without doors; there is neither a tree nor a bush in the neighbourhood to denote that the inhabitants feel a desire for the most ordinary comforts springing from such associations as tend to bespeak an approximation to civilized life. Indeed, the Santafècinos, always the most backward, have, during the last revolution, retrograded, leading a roving life in search of plunder. They place little dependance for support on agriculture, which requires too much attention and personal exertion. These people subsist, for the most part, upon mule's flesh, or upon cattle, whenever they succeed in procuring them during their incursionary depredations. They pass

their time in gambling and drinking; they are blood-thirsty, revengeful, and quarrelsome; a feast-day seldom passes without some one in the village falling a sacrifice to the disputes in which their boisterous excesses always end. These quarrels are always settled by combat with the knife, in the use of which they are exceedingly dexterous; so much so, that it is one of their principal diversions and exercises—they are trained to it from their childhood. The combat is fought by grasping firmly their long pointed knife in their right hand, while their poncho, thrown over their left arm, is used as a shield to guard off any well-aimed blow of their adversary: the contest is long and bloody, displaying a wonderful degree of agility and skill; and, according to the dispositions of the combatants, terminating either in the death of one of them, or forming a drawn battle, not however until many severe wounds have been inflicted.

The post-house is a miserable hut, with a broad raised bench constructed of mud bricks, upon which alone the traveller can rest himself. There is a small table in the same room, generally crowded with a number of cut-throat looking fellows playing at cards, drinking, and passing their coarse, loud, and vulgar jokes upon the wearied traveller, who must bear all these taunts without appearing to feel them; for it is dangerous to provoke a quarrel with a Santafècino, who will not hesitate to stab any one with whom he chooses to be offended; he would indeed glory in the murder, and be applauded by his miscreant associates. The traveller must keep a

sharp eye upon his baggage and saddle-traps, or he will otherwise be stripped of them by the thievish vagabonds, who are always on the look out for plunder. The population of the Guardia does not exceed 200 persons. When returning from Chile on this road I could with difficulty obtain a small piece of beef, which was cut into square junks, broiled over hot embers, and served up in a little dirty greasy earthen bowl. This dish I was obliged to place by my side upon the earthen bench, the table being occupied as before described, and it being not only useless, but dangerous, to request a place at the table. Without bread, without salt, or other stimulant, without plate, knife, or fork, extreme hunger only could make me partake of this savage fare, through which it was difficult to force the teeth; the only mode of separating this more than half raw flesh was by tearing it with the teeth and fingers. This fare is common in the province of Santa Fè; and an Englishman, unless he carries his canteen with him, a good store of provisions, and active servants, must adopt the habits of the most savage Indian. He must leave behind him all his nicer feelings and notions of delicacy and decency, if he wish to travel quickly, and unencumbered by luggage or attendants, or desire to proceed on his journey economically.

Leaving the Guardia de la Esquina, in the distance on the right hand, is seen the river Tercero, which hereabout forms an angle before it discharges itself into the Parana at Rosario.

After travelling over these uninteresting plains

for four leagues, we reach Cruz Alto, through which passes the boundary line between the provinces of Santa Fè and Cordova.

The whole surface of the country, especially that part of the province of Santa Fè southward of the river, is an uninterrupted pampa, which generally presents the finest pasturage grounds that can be conceived. When I was here in the month of January, the ground was completely bare and dried up, as if it were incapable of vegetation; and this will appear the more surprising when we reflect that the province is almost destitute of cattle. This was the effect of a dreadful plague with which the country had been visited—a plague of locusts in such numbers as had not been known for twenty years. I have both heard and read of these dreadful plagues, but I could never have given credit to the extent of the ravage committed, had not the effects been placed before my eyes: these insects had in great measure left the province of Buenos Ayres, and were committing their ravages in those of Santa Fè and Cordova. From the Cañada de Lucas to the Cerrillo, a distance of more than 200 miles, the locusts actually covered the ground; and it is utterly impossible to conceive the numbers of these rapacious insects: the country, but for them, would have been covered with tall thick grass, but it was now only in isolated patches; almost the whole extent of pasture ground for many hundreds of square leagues had been entirely devoured to the very roots, and the bare ground only was visible. All the gardens, consisting of extensive plantations of maize, pumpkins, melons, and water-melons, beans, and

other vegetables, had been completely swept off the surface of the earth, not a vestige of them remained; the hard pith of the maize-stalks, like so many bare sticks, only pointed out where extensive gardens had existed: the fruit trees equally fell a prey to the voracity of the insect: not only the fruit was devoured, peaches, apples, plums, oranges, &c.; not only was every leaf devoured, but the very bark, more especially of the youngershoots, was completely eaten off. At many farm-houses there are extensive groves of peach-trees, of considerable value, not only for the fruit they produce, but still more so for fire-wood, it being the only source whence this essential material of domestic necessity is obtained. I passed numbers of these peach-groves, where the leafless trees, deprived of their bark, seemed as if they were covered with snow. This, added to the apparent barrenness of the ground, resembled that of mid winter in England; the insufferable heat of an almost vertical sun alone persuaded me that I was in the midst of summer, in a climate where nature is wont to flourish in all her glory. In a morning, when the heavy dews of night yet remain upon its wings, the locust is unable to fly more than a few yards at a time, and then the ground is covered with them. As we gallop along we see them hopping aside by thousands, to avoid being crushed under the horse's feet; but by the time the sun has attained its meridian height, we find them incessantly on the wing, and in riding along nothing can be conceived more annoying than the manner in which they fly against the face of the traveller; the force with which they strike is considerable; and

unless constantly on the guard to close the eyes, the violence of a blow might produce serious consequences to that delicate organ. I rode one afternoon thirteen leagues between the Arroyo de San Josè and the Esquina de Medrano, through one uninterrupted flight of locusts: they were flying at a good pace before the wind, in a contrary direction to our course, which we rode at the rate of twelve miles an hour; they flew in a thick uninterrupted crowd, about twenty feet over our heads, the air appearing as if filled with large flakes of falling snow; but the distance of the level pampas seemed shut in all round by a thick haze, which actually darkened the horizon. The myriads and myriads of insects we must have passed on that afternoon are far beyond all calculation. Next morning the ground was covered by them as before stated, and the day was followed by the interminable flights of these insects.

The town of Cordova was beset with them, the gardens wholly destroyed, and the white-washed walls were hidden by the swarms that covered them. They entered the houses, devouring food of all kinds —nothing was free from their voracity. Curtains, clothes, and furniture, were more or less attacked; slaves were employed to sweep them off the walls of the rooms, and frighten them away as much as possible. These insects became so ravenous for want of food before they left the place that they began devouring each other, and millions were left dead upon the ground.

In curtains that had been attacked by the locusts, a number of round holes were visible in the fabric;

the margin of these holes was stained by a broad zone of brown, which did not wash out, and appeared as if they had been burnt by so many sparks of fire. They also attacked and devoured the crops of corn; but the loss did not prove great, for these voracious insects attacking the stems in preference, the heads fell upon the ground, and as this happened at the time it was ripe, the peasantry gathered up the decapitated ears, and thus in a great measure saved the crop; the straw, however, fell a sacrifice to the locusts. Numerous as were the swarms of locusts in Cordova, Santa Fè, and Buenos Ayres, I have been assured by intelligent persons of veracity, that their numbers were far greater in the province of Santiago del Estero, which is never wholly free from them. One person assured me he had seen them in the travesia so thick as to cover the whole surface of the barren sand; in some places heaped upon each other in form of mole-hills, all the bushes loaded with them. He had moreover seen them settle upon branches of trees, clinging to each other like an immense swarm of bees, until the bough has actually broken off with their weight. Of all plagues I apprehend none can equal that of the locust: we may clear them away one moment, pass days together in frightening them away swarm after swarm, but it is of no use whatever. Many persons in Buenos Ayres have assured me their gardens have been wholly destroyed in one night, after they have been at great expence in attempting to prevent their ravages. The only mode of keeping off large swarms is to preserve a constant din, by beating old kettles or drums. This has been maintained by the peasantry week after week in

their gardens, until, tired out, they have abandoned all in despair to their conquering enemy. The plague has continued in these provinces for eight months, at times disappearing for a few weeks, and again returning in greater numbers to effect new ravages upon the attempts which nature had made meanwhile to restore the injuries sustained. After the locusts had disappeared, I saw at Buenos Ayres in autumn, fresh leaves spring out rapidly from the peach, orange, plum, and cherry trees, and many fresh blossoms and full flowers thrown out by pear, cherry, and plum trees; the flow of the sap which had been kept back by the long absence of leaves, now that nature was left at liberty was returning with all the vigour of spring; the approach of winter, however, prevented the production of fruit.

At Cruz Alto, the post-house is one of several equally miserable huts; it is somewhat better than the Esquina, for around most of the huts are thick fences of cactus, and here and there a few fruit trees; there is also a chapel, and a tolerably well furnished pulperio, where bread may be often purchased: these are sufficient advantages to rank Cruz Alto high in the scale of notice, were it not for the remembrance that we are yet among the Santafècinos. The accommodation which the post itself affords is fully as miserable as any upon the road.

The space between this and the next post is a level plain totally devoid of interest; at intervals a sight of the river Tercero is obtained; the next eight posts, through a distance of a hundred miles, the road runs nearly parallel with the river Tercero, and generally at no great distance from it. The

first fifty miles is a plain, producing abundance of pasture, but beyond this the river Tercero is on both sides skirted by patches of trees forming a contrast to the unvaried level pampa country through which we have hitherto passed; these woody patches are small in extent, consisting wholly of algaroba and mimosa, thorny trees, of slow growth, and of no great height. Four leagues from Cruz Alto is the post-house of Cabeza del Tigre, a miserable hovel, planted on one side only by a fence of cactus; there are several wretched huts scattered around, but the postmaster has a good sized square enclosure, a wall of sun-burnt bricks about eight feet high, within which is built a small hovel; into this the people crowd upon the approach of the Indians. A few months preceding my arrival here, a body of mounted Indians appeared at day-break, at the distance of a quarter of a mile. On the first alarm all the people crowded to the inclosed place, and as many cattle were driven in as could be collected in the immediate vicinity. The Indians, as they approached, perceiving they could not enter the place on horseback, contented themselves with driving away as many horses and mules as they could collect, with which they retired. A few cows are kept for milking, but they are never suffered to roam away, from fear of the Indian depredations. The people content themselves with the flesh of mules, which they think excellent. The accommodation obtained here is wretched enough: the traveller who has proceeded thus far, will have become familiar with the filthy and disgusting people of the country, and he may rest assured that he has passed the climax of

wretchedness and barbarity, and that his accommodation and fare cannot by any possibility be worse.

Passing onward through a pampa country for five leagues, we reached the post-house of the Esquina de Lobaton, which has lately been wholly destroyed by the Indians, and is now removed to a new spot, where the postmaster in the period of ten months has not found leisure, nor has he had the industry to build himself a common rancho: the only appearance indicating this to be a place for relays is a coral, or space enclosed with stakes for horses, and a fort, that is, a spot twelve yards square, enclosed by a narrow ditch: a few bushes, and a hide supported upon half-a-dozen stakes, afford a shade from the broiling sun to the miserable postmaster and his two peons. On approaching this place, just before sunset, I was caught in a violent storm of wind and rain, and was indulging myself with the expectation of being able to put up for the night under a secure shelter, and of starting next morning with dry clothes, but on reaching the place I found it in the miserable state I have mentioned: here was neither food nor shelter, nor the means of drying my clothes, yet this is a post station where the horses must be changed; there was no alternative but to proceed, although it was dark, and rain was falling heavily: fortunately, the horses were in the coral, which caused less delay in changing our beasts than there would otherwise have been: still, however, such is the slow progress of these indolent people, that I had the mortification of remaining an hour and a half exposed to a drenching rain; there not being sufficient shelter even to keep my saddle dry.

The next post is Saladillo, close by a rivulet, which, near its confluence with the Tercero, bears that name in the summer—here it is all but dry: higher up there is more water; it is the stream which the road crosses at different places, where it is called Rio Quarto, Rio Ternero, Rio Tambo, Rio Sauce, &c. which accounts of this country have led people to suppose were so many different rivers. There are about half a dozen soldiers stationed here, in a fort similar to those before described. The post-house is kept by a lady of Cordova, who is a great personage in her own sphere. She is, however, very obliging: I had no sooner alighted than she readily proffered her best services, and regretted she had nothing in the house to offer me, but hearing I had travelled that morning from Fraile Muerto, a distance of thirty-six miles, without tasting a morsel of food, she obligingly sent to purchase from a neighbour some veal sausages, which she strongly recommended as most excellent food. I smiled on her asking how many yards I should like to buy; this was the first time I ever heard of sausages being sold by measurement: they were cheap enough, one real (sixpence) per yard. I ordered two yards to be purchased for myself and my peon, thinking I should thus in accommodating myself, afford a treat to my civil landlady.

The hostess ordered them to be cooked, and I partook of them with a good appetite, assisted by a morsel of bread with which she kindly presented me. They were very greasy, and contained lumps of rancid fat, and tasted strongly of the garlic with which they were flavoured; still, being somewhat more savoury than any thing I had eaten for a long

while; and being, moreover, voraciously hungry, I was very well contented with the treat our hostess had afforded me. I then little suspected that the nice veal sausages I had eaten were part of an old mule, which had probably died a day or two before. The flavour, however, remained long after the meal was finished, and for three days after I found my system much disordered. Upon mentioning this next morning at the two following stages, I learnt the nature of the sausages and the cause of my illness, and resolved never again to be tempted by any kind landlady to eat veal sausages in the pampas. The gauchos, however, are very fond of this food, thinking it the highest possible treat. While partaking of these delicious sausages, my hostess amused me with accounts of her high family connexions in Cordova, and thought it a great sacrifice of her dignity to live among savages. So little difference exists, in reality, in the habits of these people and their savage progenitors, that the pretensions of this lady were ridiculously bombastic. She had, however, some taste for the productions of her country; she had several species of large armadillo, common throughout the pampas, which she had tamed for breeding. She had a guanaco, the first I had seen on the road, since I left the Cordillera, and a pair of ostriches, which she had also tamed, having reared them from nestlings. This showed somewhat of an approximation to civilization above the barbarians with whom she lived.

The next post of Barrancas is four leagues beyond Saladillo; here was another lamentable instance of the aggressions of the Indians. Nearly a twelve-

month before, the post-house was attacked by a party of savages, who burnt the house, carried off the people, and drove away every animal belonging to it. This post-house is therefore attached to that of Saladillo, and only a single man is stationed here to provide horses for passengers. It happened fortunately that two soldiers belonging to the fortin of Saladillo were taking shelter from the rain, beneath the ruins of the place, and had not these consented to become postillions for the next stage, those who had accompanied me on the last stage being obliged to take back the horses, as they could go no further, I should have been at a loss to forward my baggage. Nothing was to be seen but the bare walls of what formerly was a superior brick built post-house; the sight of two armed soldiers skulking among the ruins, who had the appearance of villains on the look-out for depredation, put me on my guard, and I did not lose sight of my pistols. How easy would it be for such vagabonds to waylay a stranger travelling this road, rob and murder him without the least chance of discovery: this is a reason why a foreigner should never attempt to travel alone.

From Barrancas to the next post at Zanjon is a distance of four leagues. Here are only two small miserable huts belonging to the postmaster, who has nothing to give to a hungry traveller. The dirtiness, wretchedness, and laziness of these people are beyond all belief. In any exertion on horseback they are surprisingly agile; but, dismounted, they appear in an element foreign to their nature. How easy with a little labour would it be to procure from their rich but useless lands, an abundance of food! how delightful

would be the shade, and how delicious the fruit of trees which might be produced in great abundance! But these people are not willing to avail themselves of such advantages, preferring an idle vagabond listless existence, subsisting upon half raw flesh, and leading the life of mere savage Indians: yet they are Christians, and the good Creoles believe themselves a redeemed, and the Indians a condemned, race; but what is really the difference between them? Though reputedly Christians, their notions of religion are equally as vague as the Indian persuasions, and they are equally unused to the practice of religious rites. In this we see a marked difference in the effects produced by the Catholic and reformed churches. The former care not how ignorant, how much deprived the lower classes are of what are styled the comforts of religion, so long as outward appearances are attended to. The latter seek to instruct the poor savage removed from the benefits of a civilized condition: hence all Catholic colonial settlements established for centuries have made scarcely any advance towards civilization, while the colonies of the Protestants progress continually. One cannot but be forcibly struck with these differences when we witness such a state of society as has been described.

From Zanjon the road lies partly over an unbroken pampa, and partly through the woody tract which skirts the river Tercero. At the distance of four leagues is Frayle Muerto, the largest village on this route, after leaving Arecifè. It has a poor miserable chapel, and about forty wretched hovels, one of the best houses in the place being the post-house, which consists of two buildings of sun-burnt

bricks, each containing a spacious room, and though these are on a grander scale than any seen for a long while, they are not excelled by any in filthiness.

The room for the travellers is furnished with a high table, and four large old fashioned Spanish armed chairs; all are thickly covered with dirt; the flooring of the room is bricked, and being broken up in several places is covered with rubbish; the walls, which were once white-washed, are now of the color of the mud of which they are made. No one would sleep in this grand sala, unless driven into it by the rain. A bright sky and a cleaner place in the open air is always preferred to the filth and vermin within. The postmaster is an ill-behaved sulky old gaucho, who gives the traveller tolerable fare with a very bad grace, and takes care to make him pay dear enough for it; his charges are willingly acceded to now that the traveller approaches a more civilized district.

The road to Tres Cruces, a distance of four leagues, is partly through patches of thorny wood, and partly over a plain pampa; the post-house is a place sufficiently miserable. Thence to the Esquina de Medrano, a similar distance, the road lies through a tract of country still more woody.

The post-house of the Esquina de Medrano consists of a long range of buildings of sun-burnt bricks, and is far more cleanly than any hitherto seen. The postmaster is a most obliging, well informed and well educated man, having much the appearance of an European Spaniard; he affords every accommodation the country can supply; his stock of horses is excellent, and he has plenty of servants to forward the traveller with dispatch. At this place the road

leaves the line of posts leading to Cordova, which follows the western bank of the Tercero for some leagues, when it crosses that river at the ford of the Praso Tercera, and thence tends northward to Cordova.

Leaving the Cordova road, the course is somewhat more westerly, at first passing through a thick wood of chañar, mimosa, and algaroba trees, the branches of which, when I passed, were covered with locusts. Skirting the woody district, for the space of two leagues, we again enter the pampa territory, which, though destitute of trees, has a somewhat more undulating surface. At the distance of eight leagues from the last stage, is the post-house of the Arroyo de San Josè, where are a few miserable huts and a stock of miserable horses.

The next post-house is five leagues further, at the Cañada de Lucas; here is nothing but a miserable hut, where the postmaster never resides, he being a man of too much consequence. He lives on his estancia near Cordova, and keeps a slave, half negro, half Indian, as a major domo, to manage the post-house. This was the most insolent, savage-looking fellow I met with on the road, as he has no interest in obliging passengers, and is under no control; he gives way to his evil disposition, and becomes a perfect nuisance to the traveller. Half a dozen black and sambo women live in this filthy rancho, whose impudence is equally annoying and disgusting: the traveller must wait here probably two hours for a change of horses, subject to this annoyance. The misery and poverty of the inhabitants, their laziness and brutality, are only equalled by the wretched

hovel and its almost incredible dirt and filthiness. Close by the rancho is the cañada, a long pond, partly filled with rushes; as I crossed it, I observed several nutrias, a fresh water otter, or rather large rat, with a skin like an otter; from its size, colour; its double coat, and the form of its head and tail, I have no doubt that the nutria is the same amphibious animal, as the chileno coypù,—the mus coypù, described by Molina in his natural history of Chile.

The first three leagues towards the next post are over a level pampa, but the other three leagues are through a finely wooded country, intersected at intervals by extensive lawns, beautifully green, diversified with lakes and avenues of trees, leading in various directions; this resembled much, and brought forcibly home to my recollection, the woodland scenery of England, the contrast of the wearisome level pampa is at once pleasing and grateful, the scenery being enlivened by the appearance of numerous water fowl upon the lakes, and by the appearance of the many flocks of noisy parroquets among the trees. The whole of the soil is charged with saline matter. In certain patches, where it has become dry, the earth is covered with a saline efflorescence, and throughout the whole woody district vast quantities of the alkaline and saline plants abound, which are found in the extensive saline travesias near the Cordillera, such as the xumè, the vidriera, and the talinum. It would seem that the chañar, algaroba, and mimosa, flourish most in soils that are saline, at least we may judge so from the evidence offered by these provinces, for the more

saline the district, the more it is wooded by these thorny trees.

The post-house of the Punta de Agua is six leagues distant from the Cañada de Lucas; it is seated on the outskirts of a little village, which is seen in the distance with its turreted church. The post-master is a miserable niggard, who makes up for the deficiency of every necessary accommodation by his annoying garrulity and pomposity; for if not an old Spaniard, he has some European blood in his veins, which raises him many grades in self importance above the natives. This hovel is miserably wretched and filthy, and the horses provided as bad as can be.

Beyond this place the country presents a tolerably extensive wooded district, similar to that seen near the last post, interrupted by a short level space from another similar, but smaller wood. Beyond this the pampa district occurs, which is only interrupted at the half-way mark to the next post by a large solitary algaroba tree. Between these two posts I found a beautiful variety of echites, called by the natives mirasol, from its turning constantly towards that luminary, and closing its extended petals on the disappearance of its beams.

The post of Santa Barbara is nine leagues from the Punta de Agua; though the exterior of this post-house has nothing to recommend it, its interior is cheering to the traveller from its cleanliness, and the well-disposed order of its few articles of furniture; one end of the room has a neat estrado, a broad raised bench of adobes, upon which a clean

carpet is spread, after the Moorish fashion: on this four persons could sleep with ease. The obliging attention of the postmaster and his wife is worthy of remark, his activity of dispatch and the excellence of his horses deserving of our best thanks.

The next post was formerly the Corral de Barrancas, at the distance of six leagues; but the present Governor of Cordova, in order to recompense a man who had espoused his cause in the late intestine wars, decreed that the traveller should be put to the inconvenience, delay, and expense of making an angular deviation from the road, so as to lengthen the distance into two posts of four leagues each: neither of the old posts dare send their horses on the old road without incurring a fine of fifty dollars; the traveller must, therefore, direct his course to Tequa, a very decent post-house, which, though never heretofore lying on the route to Mendoza, has always been a long established house upon the line of posts, between San Luis and Cordova. I arrived at this post-house in the midst of the celebration of the harvest home; it is the custom in those parts of South America, where corn is grown, during the trilla, or thrashing time, to keep open house to all who choose to enter, where they may eat, drink, and be merry to their heart's content. It is a period of great rejoicing throughout the country, and of course produces more of drunkenness than any other period.

In the postmaster's house I met with a number of respectably dressed females from Cordova and the neighbourhood, and several persons above the com-

mon herd of gauchos; outside were above fifty peons dressed in their best ponchos, feasting, singing, playing the guitar, and carrousing after their own fashion. This added to the delay; for our landlord, after the mode of hospitality common on such occasions, would insist on my stay, and it was with difficulty I prevailed upon him to allow me to pursue my journey: he brought me sumptuous fare, dish after dish, of stews, soups, roasts, &c., sweets, fruits, and plenty of wine, of which he partook with me, and would take no pay, as it would have been a breach of the custom of the country on his part, and an insult on mine, had I insisted on it.

Tequa is seated on a little rivulet of that name, which falls into the Rio Quarto, near the Coral de Barrancas. The postmaster has a large family, extensive buildings, and was proprietor of an estancia, which was ruined during the civil war, from the effects of which he is now beginning to recover: his stock of horses is miserably bad. Along the banks of the Tequa, I passed over a heath of low bushes, which are mostly verbenas and dwarf mimosas; the greater part of the way is, however, a level grassy pampa, till at the distance of four leagues I reached the post-house of the Coral de Barrancas, where I met with a very obliging postmaster, a well-furnished and cleanly house, and most excellent horses. The postmaster, though leading the life of a perfect gaucho, which both his appearance and mode of living bespoke, cannot be worth less than 60,000 dollars, an immense property in these provinces. Farther on the road commences

pampa country, which reaches to the banks of the river Jambo; the river is skirted by bushes, principally of verbena and mimosa; this is the same stream which more southerly bears the name of Rio Quarto. The village of Jambo is seated on the river, and consists of about half a dozen huts; that of the post-house is tolerably clean; the postmaster is sufficiently obliging, though his horses are very miserable: annexed to the house is a tolerably large peach grove, but though this was the fruit season, not a peach was to be seen, all having been cut off by several tremendous hail storms early in the season. Many of the hail stones are described as having been of the size of pigeons' eggs, the ruin to the fruit trees had been general throughout the province.

At the distance of four leagues is the post-house of Aguadita; the road lies over an uninterrupted pampa country, very slightly undulating; not a tree nor a bush is visible; as usual, the numerous parallel ruts divided by a narrow ridge of raised earth, coated with tall grass, point out the course of the traveller. The post-house consists of two wretched hovels, with no enclosure near them except the coral, not even a peach, poplar, or willow tree, as is usually seen about the post-houses in this province. The postmaster was somewhat of an exquisite, for a person of his stamp, or a gaucho fino; he was a fine active fellow, a native of Buenos Ayres, quite *au fait* in the art of breeding and training horses; most expert in the use of the lasso, and especially of the bolas, which he always carried round his

waist; his address was pleasing, his countenance expressed gaiety and good humour, his carriage was graceful, he was dressed in a small blue jacket, with a double row of round gilt buttons, and a little narrow brimmed black hat; his scarlet fringed poncho doubled, was tied round him like a petticoat, by his long green sash, which folded round his waist; he had white calico trowsers with a deep fringe at the bottom, but he had neither stockings nor shoes mounted on horseback, he was a subject for a painter, the horses he provided were by far the best on the road.

Proceeding over the same unvaried pampa for four leagues, we crossed a steep barranca, or dry bed of a rivulet, with high steep banks, and arrived at the post-house of Los Barranquitos or Los Chañaritos, which unquestionably is one of the best upon the road; the people are obliging; the postmaster a hearty fat jolly fellow; his wife very affable, and his family of grown-up girls, very numerous and agreeable. They have a number of slaves, and the traveller is as promptly and as well attended as, from the habits of the people, and the nature of the country, can be expected.

CHAPTER V.

OBSERVATIONS ON THE COUNTRY BETWEEN BUENOS AYRES AND MENDOZA.

Neighbourhood of Mendoza described.—People.—Education.—Slaves.—Provisions.—Cattle.—Pampas.—Difficult to colonize.—Want of Trees.—San Juan.—Proposal for a Colony there.—Caravans.—Province of Cordova.—Cordova once a seat of Learning.—Its former and present state.—Geology.—Mountain Ranges.—Mines of San Juan.—Carolinas and Famatima.—Pampa Indians.—Their Manners.—Customs.—Dress.—Superstitions.—Population of the Provinces of the La Plata.—Conduct of the Spanish Government.—Its Consequences.

THE town of Mendoza is situated at an elevation of 2600 feet above the level of the sea, upon the margin of a great travesia, before described, which here presents a very gentle declivity, sloping both northward and eastward.

The Paramillo, or lower range of the Cordillera, runs north and south, parallel with the great chain of the Andes, from which it is separated by the plain of Uspallata. The river of Mendoza takes its rise in the Cordillera, between the two highest peaks of the great chain called Tupungato, and the Volcan de Aconcagua, crosses the plain of Uspallata obliquely to the southward, passes through the Paramillo chain by a channel or fissure which it has cut through it, and descends into the plain of Mendoza,

first running north-easterly, and then more northerly, until it is lost in the Lakes of Guanacache.

The town of Mendoza is situated eastward of the Paramillo, and westward of the river of Mendoza, at a distance of about ten miles from the former, thirty miles from the latter, and about sixteen miles to the northward of that part of the river, as it descends from the mountain and enters the plain. At this point is the village of Luxan, where a channel has been dug for the purpose of conveying water from the river to Mendoza. The water conveyed by this channel is distributed over the cultivated district, which has a circumference of about fifteen miles; a small stream of water runs through the yards and gardens of all the houses in the town, and every vineyard and plantation has at certain distances little irrigating channels passing through them. The facility of procuring water has taught the people to over-irrigate their lands, and the vineyards and fruit trees suffer in consequence, the excess of water is found greatly to increase the quantity of produce to the destruction of the flavour: and we see the grounds actually drowned with over irrigation. The abundance and cheapness of all kinds of produce render the farming people independant of each other, as every one produces sufficient for the maintenance of his family, labourers, and servants. It is common to see the proprietor of a large vineyard, garden, and pasture ground, a poor and miserable being; his wants are few, and these the climate supplies, and renders little clothing necessary: his habitation consists of a miserable hovel, without doors or windows; a raised mud bench, covered

with a carpet for his bed, or more generally he sleeps in the open air upon a bare hide, stretched upon the ground within his enclosure. A rough table, two or three chairs, a black bottle or two, and a glass, constitute all his furniture; a few earthen dishes and pots comprise all his table and cooking service; his meals are served up in an earthen bowl, out of which all his family eat in common with himself, with their unwashed fingers, and sip the broth with the same horn spoon, which is handed from one to the other. A cotton shirt or two, a jacket and short trowsers of coarse blue flannel, constitute the whole of his wardrobe: his wife and children live huddled together, more like pigs than civilized human beings, and yet this misery is common amidst the utmost abundance that man could desire. Around the miserable hovel is a fine vineyard, abundance of trees which produce olives, figs, peaches, apples, &c. in great profusion, and delightful pastures of rich lucern grass. His land is stocked with fine horses, cattle, and sheep, all in excellent condition, though but little attended to by him: nature has poured all these gifts upon him, and irrigation performs the rest. These cultivated grounds are all inclosed within mud walls of rammed earth: these walls are called tapiales; they are constructed in a sort of case nine feet long, five feet high, and a foot and a half broad; the case is bound together with hides; three peons are employed in the work; one to throw in fresh earth from the outside, while two others within ram it down forcibly with wooden ramiers: they cost altogether one real the vara, or sixpence the Spanish

yard in length. In some places these fences will last many years, but in others they require renewing every four or five years, owing to the saline nature of the soil, the efflorescence of which causes the earth to crumble away.

The climate of Mendoza is one of the finest in the world: this is more especially evinced in its efficacy in pulmonary complaints. Doctor Gillies, an English physician, who has been four years resident in this town, describes the climate in this respect as superior to any other: he was compelled to leave England from a severe pulmonary affection, which had gone to such an extent that his friends scarcely expected he would ever reach the shores of South America alive. I have already quoted Dr. Colesberry, as another instance, and am besides personally acquainted with four other persons who have experienced similar benefits. Doctor Gillies has collected a number of valuable observations respecting this remarkable climate, which he intends to publish. The rapid improvements that have taken place in Mendoza, during the last few years, are in great measure due to the indefatigable exertions of Doctor Gillies, who has applied himself incessantly to the amelioration of the people. This intelligent benefactor to the Mendozinos has effected a material change in the moral conduct of the people; the females in their conversation and demeanour no longer show the same laxity they formerly displayed; the men are more disposed to social intercourse with the females, from which they were before to a considerable extent excluded. It was the custom for the men to associate in parties, prin-

cipally at coffee-houses, which tended in a great degree to exclude the women from social intercourse; but a great change in this respect has taken place, and the women have acquired a consideration in society they never before possessed; education, at his instigation, was extensively set on foot. San Martin had some time previously established a college or public school in Mendoza, which he endowed with the property of a convent, for the education of seventy or eighty youths; but Doctor Gillies applied himself to the establishment of a more general school upon the Lancasterian system, in which he succeeded. He made several attempts, and at length succeeded in establishing a school for girls, which is still in active existence. He obtained the co-operation of the natives in forming a sort of literary society or school of mutual instruction among the young men of the town, which was producing much good to the rising generation; and books for a public library were collected from Buenos Ayres. Doctor Gillies obtained, from almost every foreigner passing through the place, a donation in books, or money for their purchase. Improvement and liberal notions were propagated so fast in the town of Mendoza as to alarm the older bigotted people and the clergy, and serious measures were had recourse to, to suppress these useful institutions, and they were all abolished. Doctor Gillies from his prudent conduct, having afforded no pretext, escaped banishment, although the society for mutual instruction was dispersed: fortunately, however, the girls' school was overlooked, and has never ceased to be useful since its first institution. A counter-revolution had taken place some

short time before I passed through Mendoza in the beginning of 1825, and Dr. Gillies was then actively employed in his former useful and meritorious labors —the re-establishment of the society, the library, and the schools, which the events of the times had for a while suppressed.

The government of Mendoza is independent, and is conducted by a local, annually elected, representative assembly, which sends two deputies to the general congress held in Buenos Ayres.

The Mendozinos generally are a proud, bigotted, conceited people: the rising generation of young people are beginning to display a different character, but this is visible only among the few who have received the aid of education. Although they have not many good qualities, they are not remarkable for evil propensities. They are quiet, harmless, kind to their slaves, and do not show to their inferiors that tyrannical unfeeling authority which is to be seen in other more civilized countries. Slaves seem to constitute an essential part of the family; and although all the offspring of these slaves have been declared free, the right of property over all born previously is still in existence. It seldom happens, however, that a slave is sold by the family in whose service he has been born, except in cases of absolute necessity. The abhorrence entertained by the lower order of Creoles for servitude is very remarkable: it is considered a mark of degradation in a free born person who is not a pure negro, especially a female, to hire herself as a domestic servant. This feeling, however, does not originate from any notion of independence, but results merely from

ignorant pride. The Zambo Creole, who has the least admixture of European blood in his veins, thinks himself as far superior to the negro as the European does to the Creole. During the six months solitary stay of my wife in Mendoza, she had the greatest difficulty in procuring a servant girl, to assist her in taking charge of her infant: every exertion was made to procure one in vain; it could not be effected for three months, and then only as an especial favour. Application was made to several families who had numerous slaves, without employment for them, for permission to hire one, but the pride of the head of the family was too great to endure such a degradation. At length a poor woman prevailed upon her sister, a young girl, to accept the offer; and, although only one degree removed from the negro, great pains were taken to let it be understood she was not to be considered as a servant, for she was *une donzela* (a young lady). She was to be the companion of her mistress, and not to be sent alone through the streets on little errands, but merely to assist the Inglesa in taking charge of the infant. She was nearly destitute of clothing when she came; my wife clothed her anew from head to foot, and took great pains to make her neat and cleanly, but she always retained the notion that she was acting in the capacity of a companion more than a servant.

This detestation of servitude seems to arise from the great number of slaves in Mendoza, upon whom all the menial duties of the house devolve. Every family in decent circumstances possesses many slaves, the males attending to the vineyards, the

females being occupied in domestic duties. The number of female slaves in Mendoza is considerably greater than that of males: San Martin took a great number to recruit his liberating army of Chile. The abundance of every necessary of life, the number of slaves, and the warmth of the climate, have rendered the bigotted and ignorant people of Mendoza more than usually lazy, proud, and selfish. The Doña Rita, who, during my stay in Mendoza, displayed such marked attention, which she repeated on my return, showed little or no consideration for my wife, and when reproached by Dr. Colesberry for her marked neglect, replied, "What could I do with a woman and child, who has no slave." The same haughtiness was observed by all the Mendoza ladies to a female and a foreigner cast among them, under circumstances which ought to have commanded their attention. Dr. Colesberry, who possessed much influence among the natives, took great pains to shame the principal females of Mendoza for their conduct, which he considered neglectful and inhospitable; but he could not induce them even to consent to call upon her, unless he could persuade her to remove into the heart of the town, and leave the family of the poor and industrious widow with whom she was so fortunately placed. More happy, however, in this retirement than she would have been in the midst of the pride and ignorance of this people in the town, she remained in a place better suited to her wishes, and I only allude to the circumstance to illustrate the character of the people.

When General San Martin afterwards visited

Chile, and became more intimately acquainted with me, he made many apologies for himself, and the Mendozine ladies, for his and their seeming neglect, which he placed to the account of illness on his own part; but the truth is that, as far as it respected him, the cause is easily explained. A woman among the Creoles is looked upon as a mere domestic appendage, to whom attention is only paid when in search of favors, or out of compliment to the husband. Don Juan de la Cruz Vargas, who was so overpowering in his attentions on our arrival, hardly ever called upon my wife during her long stay, although living only the distance of three houses from her: as administrator of the post, through whose hands all letters passed, it might be thought that his greatest pleasure would have been to carry or send her my letters as they arrived; but this never happened, although he passed the house six times every day, and was all the time writing to me of the attentions he felt pleasure in showing to my wife during my long absence. On my return to Mendoza, to conduct my wife to Chile, nothing could exceed the attention he paid us, or his exertions in preparing the necessaries for our departure: the truth is, that throughout South America but little real hospitality or friendship is to be met with. Those instances of hospitality displayed to foreigners, and which I have so frequently experienced, have ever arisen from feelings of ostentation and hypocrisy combined. I have been present when similar demonstrations of hospitable attentions have been shown to their own countrymen, against whom, upon their backs being turned, they have broken out

into strains of hatred and invective; and yet, at their next meeting, they have again bestowed the same attentions, and again made the same hollow professions of friendship.

The people of Mendoza, though in general quietly disposed, display a more lively interest in political affairs than the Chilenos, and in this they somewhat resemble the people of Buenos Ayres. General San Martin assured me that he found this spirit so turbulent, that it was necessary to establish in Mendoza a complete system of *espionage*, so that every day he was informed of the thoughts and actions of the Mendozinos. The minutest circumstance in the families reached his ears; no one was exempt from the observation of his spies, who were incessantly on the alert. The General was, from an early period, a great adept in cunning and intrigue: he himself has assured me that his most intimate friends were the least acquainted with his sentiments; that no one had any communication with his spies but himself; that they were suspected to be so by nobody but himself; that to hold converse with them he would frequently sally forth of an evening dressed as a gaucho, a native country peon, and meet his spies in some unfrequented corner of the suburbs. During his residence in Mendoza, he appears to have been a despot—every one feared him—and he might, after the battle of Maypo, have reigned as he pleased in the province of Cuyo, had not his ambition been of a more elevated character.

Living is not expensive in Mendoza; wheat is cheap; the fanega (of three English bushels) usually sells for one dollar and a half to two dollars and a

half (six to ten English shillings). Beef is also cheap, although a municipal duty is levied upon its sale of one real per arroba; it is sold in the market place by retail for five reals (two shillings and six-pence) per arroba of twenty-five pounds, which is about five farthings per pound. Every other article of food is cheap in proportion. Vegetables and fruits are in great abundance, and can be obtained in large quantities for a trifling consideration. A sheep is worth from about a dollar to twelve reals (four to six shillings), the fleece of which is worth a real and a half (nine-pence). Horses are abundant and good; the average price of good ordinary horses is from six to eight dollars (twenty-four to thirty-two shillings) each. Mares may be purchased in any quantity for half a dollar (two shillings) each. Oxen brought from the distant breeding-farms are worth from eight to ten dollars each; but when fattened in the rich lucern pastures, they fetch from sixteen to twenty, and even twenty-four dollars. A mule is worth from six to eight dollars. Mule hire is not expensive; when large troops are employed, the price of each load to Chile is five dollars, to Buenos Ayres twelve dollars. The price of cart-hire is 120 dollars to the latter place; each cart will carry about 3,200 weight: the usual price of cart hire is therefore about three dollars and a half (fourteen shillings) per quintal, or 100 pounds; and mule conveyance about three dollars (or twelve shillings) per quintal.

It will be seen, on inspecting the map, that from Buenos Ayres, following the course of the Parana, as far as the Esquina, thence to San Luis, and thence

to Mendoza, in a westerly direction, there extends a long way to the southward a vast extent of level country, void of trees, producing only coarse grass—a country distinguished by the name of Pampas: it is scarcely ever interrupted by perceptible undulations, and is covered with numerous lakes, drained underground through the sandy soil from one to another; the waters of which, proceeding from several rivers, are lost and absorbed in the level of these sandy plains. In the north-west extremity of this demarcation is a large tract of level country, comprising an extent of 30,000 square miles, the soil strongly impregnated with saline matter, bare of vegetation, partly covered with forests of thorny trees and bushes of diminutive growth, and interspersed with numerous swamps and saline lakes, fed by the two considerable fresh water rivers of Mendoza and San Juan: these lakes are named Guanacache, and are deprived of their surplus water by a channel, called the River Desaguadero, which empties itself into the Lake Bebedero, near San Luis, where it is lost.

This large tract of saline barren country is called Il Travesia, the Desert of Mendoza. This ground, barren from neglect, is remarkably productive when assisted by human industry, requiring merely lightening by the plough, and irrigating with fresh water; of this we have evidence, not only in the productive fertility of the neighbourhood of San Juan and Mendoza, but in every other spot where a current of water has been brought upon it. Upon several more elevated table lands lying between the

mountains of Cordova. upon those of Santiago del Estero, those of Rioja, Tucuman, and the other several northern provinces, are level barren tracts of ground destitude of water, producing nothing but bushes and low thorny trees; the soil is strongly impregnated with saline matter: almost the whole surface of these provinces is of this nature, except in the barren mountainous ramifications which intersect them, in the hollow gorges of which, in very few places, are small rivulets of water, which might contribute to the existence of a small number of settlers, were it not that the intervening country prevents communication with other parts. These level barren tracts of ground are likewise termed Travesias. In these provinces there are but few cultivable vallies. In this extent of country, bounded on the northward by the river Dulce, on the west by the Cordillera, an extent occupying above 100,000 square miles, there is scarcely one spot offering the least inducement to settlers. With the exception of Santiago del Estero, Tucuman, San Juan, Mendoza, San Luis, and Cordova, which are upon the margin of this immense district, in the interior of this vast country there is only a single town, viz. that of Rioja; and, excepting the rivers Dulce, San Juan, Mendoza, and Tercero, which form the boundaries, there is only one river of fresh water, the Anqualasta, which supplies Rioja, and this is very inconsiderable, soon becoming lost in swamps and saline lakes, in the midst of this inhospitable desert. Communications across this Travesia are very difficult and tedious, as the burning heat of

the climate, the saline swamps, the inhospitable soil, bare of grass, the want of houses and posts, and, above all, the want of fresh water, render travelling both annoying and fatiguing: little hope exists of seeing it better peopled until other fertile parts of the Continent have become densely peopled, and this cannot happen for ages.

The Pampa country is but little known: that portion traced in the map is in great measure appropriated and used for the rearing of cattle; it is, however, very barely and scantily settled. The extent of this Pampa country reaches as far as the river Negro. The Diamante, and Colorado, of which so much has been said, are assuredly both lost in extensive saline swamps and lakes; the intermediate parts present much good pasture, and are well adapted to the rearing of cattle, could the country be protected from the Indians. The settlement and population of this fine district must proceed by very slow degrees. No hope can be entertained that it will be hastened by extensive emigrations, a settlement must proceed gradually from some central point, and this does not yet exist: many centuries must elapse before this vast territory can become rich and populous. The country to the southward of the river Negro is described as being much finer than the Pampa territory; it is more undulating, better wooded, better watered, and capable of river navigation from the coast.

One of the most inexplicable facts connected with the natural history of the Pampa region, is the almost total absence of wood: some persons have attempted to account for this, by assuming that

its growth has been impeded by cattle, which without regard to truth have been said to graze in immense herds in the wild state upon these plains. No doubt can exist but that cattle were first introduced into the country some time after the arrival of the Spaniards; though many have asserted the contrary. The first instance of their introduction into Buenos Ayres is still on record: eight cows were brought from the Brazils, at an immense expence, by an enterprising individual; and there is still a proverb in common use in that town, where, when a person is desirous of expressing any thing as being extravagantly dear or valuable, he says, "It is worth as much as one of Gaete's cows."* The oxen that have been brought from the southern Pampas present, however, a different physiognomy from the common ox; it has a short thick turned up nose, called niata, and is of a smaller and more thickset breed, which character all the Indian cattle are said to possess. Climate, we know, produces a remarkable effect

* "Several Portuguese came with this suit, among them the two brothers, Goes, of noble birth. Their memory has been made eternal in the country by the introduction of eight cows and one bull; this laid the foundation of the colossal property which makes the river Plate one of the emporiums of the country. The enormous price which in common estimation was placed upon each of these animals seemed to announce the riches which have since accrued. The driver of these cattle was a Portuguese, named Gaete, who was recompensed for his excessive trouble in driving them, by having one of the cows given to him. This, in the opinion of the people, was so enormous a reward, that when they wish to exaggerate respecting the high price of any commodity, they say, 'It is dearer, or as dear as Gaete's cows.'"—Funes, Hist. vol. i. p. 153.

those terrible and fatal maladies which carry destruction among the inhabitants of the choicest portions of our globe. One of the most singular peculiarities of this climate is the extreme dryness of the atmosphere, there being no perceptible dew at night, and scarcely any rain thoughout the year; the air is very rarely charged with much moisture; the winter is perhaps the finest and dryest season of the whole; and the people here enjoy an almost uninterrupted succession of the most serene weather, with a pure atmosphere, and a rarely clouded sky. This fair portion of ground, seated in the midst of an inhospitable desert, partakes of the same nature of soil, and is naturally barren and unproductive; but the practice of artificial irrigation, as far as it has been extended, has changed its character to an extreme of fertility; and that saline impregnation of the soil, which in a state of nature seems to check vegetation, is found to answer the same purposes artificially, when assisted with water, that manure affords to over-cultivated and poor soils. Here are produced in luxuriance wheat, barley, maize, grapes, olives, figs, pasturage, garden produce, &c. in great variety, and all the fruits of the temperate zone. Dr. Gillies has been labouring to obtain a grant of a large quantity of ground, and the concession of such privileges as would induce a number of our countrymen to establish a colony in the neighbourhood of San Juan. It is difficult to overcome the prejudices of the natives, but as illumination and liberalism, the destruction of fanaticism, and the downfall of priestcraft, are working their way with rapid strides, it is probable that some satisfactory

of the climate is particularly favourable to the culture of the grape, and the trade in raisins and dried figs, no less than in wines and spirits, might be made of considerable importance. The cost of managing a vineyard in the province of Cuyo is very trifling; the crops are certain, abundant, and of superior quality; the manufacture of wines and spirits is not expensive, and the sale for the produce, when manufactured, certain. The proposed colony in San Juan, in furtherance of these objects, might be attended with far greater prospect of advantage than an agricultural settlement in any other part of the country. The tract of land in question commences about fifteen miles to the eastward of the town of San Juan, and extends along the course of the river about sixty miles in the same direction, being nine miles in breadth in its narrowest part, and twenty-seven miles in the broadest; the extent includes 150 square leagues, or 1350 square miles, the whole being easily susceptible of irrigation from the river. The soil is the same as that of San Juan and Mendoza—a yellowish clayey loam, hard and friable, from want of moisture and constant exposure to the sun; it is destitute of pasturage or shrubbery, and is more or less covered with resinous and low thorny trees, none of which exceed twelve feet, and are generally only six feet in height. The mode of cultivating the grape here is similar to that in Chile, which will be described in its proper place.

The town of San Juan is 150 miles to the northward of Mendoza, and though smaller in extent and population, it possesses far greater capa-

bilities, as well on account of the warmth of its climate as in the size of its river, and the greater extent of country capable of being brought into cultivation. The temperature of San Juan is considerably higher than that of Mendoza; in the summer time the thermometer is frequently 100° Fahrenheit in the shade, and has been known as high as 109°: it is owing to this that the grapes produced in its district are of finer flavor, and produce far better wine, containing more alcohol, and does not therefore so readily pass into the acetous fermentation. The mountainous ranges in its neighbourhood do not attain any considerable elevation: in them are found fine statuary marble, gypsum, sulphur, alum-rock, and copperas; and the earth in its neighbourhood is strongly impregnated with the sulphate of soda, which is dug up and washed for the purpose of extracting it for medical purposes.

The traffic between Mendoza and Buenos Ayres is usually performed by carts drawn by oxen. The construction of these carts is simple; the body consists of a square frame of wood twelve feet long, and three feet and a half wide, having in its centre a pole, which runs under the bottom, to which it is attached, and extends forward ten feet; from the end of this the oxen draw. A wooden axle is fixed transversely across the middle of the body; the wheels are about eight feet and a half high, and strongly made, without a single nail or piece of iron about them. The nave is made from a round block of hard wood, one foot and three quarters in diameter, and two feet and a half long; into this twelve spokes are tenanted at right

angles. A rim of fellies, six inches broad and four inches thick, is mortised upon the other ends of the spokes; and outside of these another circular rim of fellies, of equal breadth and thickness, breaking joints, is attached by wooden pegs. This outer rim answers the purpose of a tire, and can be replaced by a new set when the other is worn out, without detriment to the wheel. The cart has a tilt seven feet high, made of canes and rushes lashed with strips of hide; raw hides are thrown over the top to carry off the rain. Each cart is drawn by six oxen yoked in pairs by a cross bar of wood lashed behind their horns; the yoke of the hinder pair is lashed to the end of the perch, to which is also attached the ends of strong hide thongs from the yokes of the next pair of oxen: the two front pair follow each other closely, but a space of fourteen feet intervenes between the second and shaft pair of bullocks; so that in crossing a river or a bog, the two former may have passed the pontana, and reached the firm land, by the time the loaded vehicle has arrived at the place of obstruction. The manner of goading and directing the animals is somewhat singular. A thin pole, about five feet long, projecting forward horizontally, is lashed to the roof of the cart, having at its extremity a grooved hole through which a string passes: a goad is made of a hollow cane, forty feet long, the butt-end being about four inches in diameter, while the smaller end runs tapering to a point. The front end is generally made of a piece of willow secured to the end of the cane, and is armed at the tip with an iron point, neatly and curiously lashed on by thin strips of horse-hide: this goad is hung in a kind of inverted

stirrup, attached to the end of the before-mentioned string, by pulling which, the driver, as he sits in the cart, can elevate or depress at his pleasure the stirrup which serves as the fulcrum of his goad, and supports it nearly in equilibrio, as the thick butt-end counterbalances the lighter and longer end that tends forward: thus suspended, the point can be easily thrust forward or side-way, so as to goad the haunches of the forward yoke of oxen: about five feet from the extremity, another small goad, armed with an iron point, hangs pendant by a string; so that by giving to the cane a sideward motion, and lifting the butt-end, the point can be directed dexterously, at the pleasure of the driver, upon the haunches of the second pair of oxen; a short lance held in his hand serves to goad forward the shaft-yoke: the load is so disposed upon the bed of the cart, as to be nearly balanced over the axle, giving a slight preponderance, so as to bear upon the yoke of the shaft oxen. The carts travel together in close succession, each cart carrying behind it an earthen jar containing fresh water, which is not to be met with in some places for several days. The time occupied in each journey is about thirty days. The carriteros, or drivers, are generally natives of Santiago del Estero, men bred up to this business; they are a barbarous and savage race, but trustworthy; one of their chief delights on the journey is to scramble for the blood of any animal that may be slaughtered for the use of the troop, for the purpose of besmearing with it the willow termination of their long goads, on which they pride themselves. The number of persons usually attendant upon each troop

is a driver to each cart, a sort of major domo, mounted on horseback; a carpenter; three or four peons to attend and bring up the relays of oxen; two or three other peons, whose occupation is to take charge of the horses and mules that accompany the expedition. In a troop of twenty carts it is usual to have 250 oxen, and above thirty horses and mules. They always travel in numbers never less than twelve carts, and often above thirty together.

The reason why so many carts travel in a body is to afford mutual protection against the attacks of the predatory Indians, who at times infest their line of march, in hopes of attacking them. It is therefore customary to keep the animals, at all periods of the journey, within a short distance of the troop; and it is usual to send a-head two of the peons, to give notice of the approach of danger. Whenever an attack is feared, the carts are all drawn up close together in a circle, so as to form an inclosure impenetrable to the Indians, into which all the cattle are driven. The peons then unite in a body within their fortified position, some, though very few of them, being furnished with muskets. The Indians never besiege any place or encampment; they attack, or it would not be difficult to starve the animals, and compel the party to surrender. If they fail, upon one or two smart charges, to gain their object, they seldom persevere, but retire with precipitation.

Having given some accounts of the provinces of Mendoza, San Juan, and San Luis, it may be desirable to say a few words respecting the other provinces of Cordova and Sante Fè through which we have passed.

The province of Cordova boasts of a city of the same name, a place next to Buenos Ayres in point of importance. Under the Spanish authority, Cordova was a place of considerable consequence; it had a large population, and a more intelligent people than the other Spanish colonial cities could boast of: it was indeed considered the focus of South American literature; its university was formed for the education of the most eminent Creoles. Here the Jesuits reigned in their fullest authority; it was the centre of their power, their influence, and their commerce. Here was the see of a bishopric, which added considerably to the importance of the place. One of the principal branches of its commerce was the trade in mules, which were sent to the great annual fair of Salta. The traffic in the mining operations of those inhospitable elevated table-heights sacrificed every year an incredible number of mules; and it is said, that from the province of Cordova 80,000 mules used to be sent every year to the fair of Salta; but this traffic has entirely ceased from the events of the revolution, the Spanish capitalists have withdrawn their funds from the enterprizes in which they have embarked, and the working of the mines has ceased. Men of property, wherever patriot influence has been first extended, have fallen victims to the new order of things, and their property has been confiscated; in all the departments maladministration and dishonesty in the public authorities have been observed, more especially in the upper provinces; all influence has fallen into the hands of the few more wealthy Creole families, who have established a kind of exclusive privilege,

which they have distributed among their dependants, who without experience or education were led away by selfish, tyrannical, ignorant, mean, and dishonest notions.

The territory included in this province is larger than Ireland, and yet it does not contain a greater population than 30,000, and notwithstanding it is one of the best peopled of all the contiguous provinces. The whole country is well adapted for the purpose of breeding cattle, especially mules and sheep; it is the key to all the upper provinces, so that their trade must pass through this route. Most of the owners of the carts trafficking between Upper Peru and Buenos Ayres reside in Cordova. A plan has been long since proposed, and will one day be carried into effect, of establishing a water conveyance between Cordova and Buenos Ayres. The river Tercero, which flows into the Parana, is navigable for six or eight months of the year, as high as Punta de Gomez, but for two obstructions or rapids, which might be easily removed, as they are of small extent, and as the river is nearly dry for three months of the year; the rock which crosses the river bed might be blasted and quarried without much difficulty. The first of these obstructions occurs at the Punta de Gomez, not far from Rosario; the other at the Paso Fereira. There are persons who remember a vessel to have once passed over the first obstruction, and ascend as high as Paso Fereira. A project for removing these obstructions was seriously talked of when I last quitted Buenos Ayres; and a privilege was given to a Frenchman, who had

engaged to accomplish it; but as he did not possess the capital to carry it into execution, little chance exists of its being immediately completed. The saving of 400 miles of land carriage is certainly an affair of vast consideration; the trade of the country is, however, yet in too backward a state, and the population too thin, to warrant any speculator to hope for a remuneration for the capital that must be sunk in executing this useful work.

The city of Cordova is arranged in rectangular squares; it is a sombre place; the houses are for the most part built of rounded stones brought from the bed of the river; the streets are not paved, and the soil being very sandy, renders the air hot and sultry; the town too, being built under the steep bank of the hill upon the bed of the river, the atmosphere is always still and unhealthy. Some of the public buildings are good, according to the Moorish style; but they are heavy and clumsy according to our standard of taste.

Of San Luis, I have before given an account. The principal wealth of its scanty population is derived from its farms, which are well adapted for the breeding of cattle; the finest part of the province for this purpose is that bordering upon the western slope of the Cordovese chain of hills, where the Rio Quinto takes its rise.

The geological structure of the countries we have passed through presents nothing remarkable: the little detached mountainous patches observed upon the elevated travesia or puno land, such as that to the eastward of San Luis, that of the Carolinas, of

the Morro, which extends as far as Achiras, and then runs northward, may be considered only as interrupted terminations of the Cordovese chain of hills, from whose ravines proceed the little streams called the rivers Primero, Segundo, Tercero, Quarto, and Quinto; these hills are all of mica slate. The Cordovese range is also of mica slate and granite, which appears, from the account of Helms, to extend northward as far as Tucuman, a distance of about 500 miles. Beyond this, the grand branch of the Cordillera tends in a NW direction towards Potosi, and thence until it unites itself with the great longitudinal ridge running through Peru. This ridge commences at the straights of Magellan, and forms the isthmus of Panama. The former branch, before it reaches Tucuman, begins to change its geological aspect by gradual alternations, until nothing but clay slates appear: this seems to be the prevalent structure throughout all the range between Tucuman and Potosi, a length of 700 miles. About midway of this distance, that is, from the Sierra, which lies to the westward of Jujuy, an extensive branch of these floetz formations crosses the high puno lands and barren table heights, which lie to the westward of the before-mentioned chain, and tending in a southerly direction, pass through the province of Rioja, and terminate in the Parano range of mountains, which lies to the westward of Mendoza; a lateral branch of this chain goes round the northward of the lakes of Guanacache, and terminates in the Alto del Yeso, a little gypseous range which lies to the westward of San Luis.

In the northward part of the province of San Juan are several gold mines: they are all of very small extent, and poor in quality. Upon the limits between the provinces of Cordova and San Luis are two gold mines of some note among the natives, though they are not worked; they are at no great distance from each other, in detached hills, called the Solosta and Carolinas mountains. The mines of Las Carolinas are said to be the richest, and were formerly of great estimation, until they became suddenly inundated. I have been assured by several Cordovese of great respectability, within whose recollection they were wrought, that the ore is extended in one uniform vein of very considerable thickness; it was said not to be of the nature of common ores, which require to be worked by the operations of blasting, of the crow-bar, or of the wedge, but could only be extracted by chiselling (por el cincel), the ore being tough, metallic, and extremely rich; the metal obtained was an alloy of gold and copper, the former bearing a proportion of sixty to forty of the latter. If this be true, these mines must be inestimable; no small degree of allowance, however, should be made for exaggeration, and a great portion of these asserted riches must be placed to the account of the marvellous. A belief is current among the best informed natives, that the old workings may be drained of the water which fills them, by driving an adit for the length of about 1500 yards, as it is calculated that the bottom of the mine is above the bed of a small ravine, which descends towards the river Quinto, in which case the recovery of the workings, it is estimated, may be effected with-

out machinery, at an expence under 70,000 dollars, or 14,000*l.* sterling; but these assertions are made without any survey or better knowledge than the mere conjecture of inaccurate observers.

The most noted silver mines are those of Uspallata, in the province of Mendoza, and those of Famatima in the province of Rioja. The former are particularly described in another chapter.

The mines of Famatima are situated in a low mountainous range about thirty leagues to the southward of Rioja, a town nearly 600 miles from Cordova, and 250 from Santiago del Estero, which is the nearest town in any direction. The ores of the Famatima mines are said to be very rich. They were discovered about thirty years ago. The ore exists in a low and nearly insulated mountain, about five leagues in circumference, and of an oval form, in the midst of an elevated table-height, and the most barren desert that can be conceived. Small dry resinous bushes are found in the neighbourhood, and these are the only fuel that can be procured; there is no potable water nearer to the mines than thirty-six miles. They were first begun to be worked about the year 1800, and continued to yield rich ores for ten years, when, in consequence of the revolution, the Spanish capital employed therein was withdrawn. Since this time they have ceased to be worked. The ore is a sulphuretted silver, mixed with native silver, in a rock of carbonated lime and clay slate: the ore is spread out in what the Spaniards call a manta, a very extended thin vein of nearly equal thickness,

and very near the surface of the mountain. There have never been, therefore, any regular workings or galleries, as it is sufficient to dig a small well or pit a few yards in depth to come at the ore; as the sheet of ore is of no great thickness, each pit is soon exhausted. The richness of the ore depends upon the presence of native silver in the calcareous stratum; some of the pits are so rich as to yield 121 marcs per caxon. I understood, however, that the average product of all the ores during these years amounted to 53¼ marcs per caxon, which is a very extraordinary richness, when we consider that the produce of the Potosi mines average seldom more than six to eight marcs per caxon. But the expence and charges attendant upon the working of the Famatima mines, and the reduction of the ores, are enormous. This is owing to the desert neighbourhood, and its almost impossibility of permitting the residence of any considerable number of persons, on account of the extreme insalubrity of the mining district, the scarcity and great distance from water, and the still greater distance from which all sorts of materials, as well as food and sustenance, must be brought for both man and beast. It is considered impossible to work the ores on the spot: they must be carried to Rioja, a distance of ninety miles, upon the backs of mules. But the situation of Rioja itself, in the centre of a desert of above 500 miles in diameter, presents great obstacles, and causes such heavy expences, upon any mining operations to be carried on in this province, as must make them unprofitable. Such in fact was the case during

the ten years in which these mines were worked—no less I was told than near a thousand pits had been dug during this time: all those which produced ores that did not yield more than forty-five marcs per caxon, were abandoned as unprofitable, and the profit on the richer mines was small. During the last year, a company was formed in Buenos Ayres, of native and British merchants, who agreed to advance a certain capital for the working of the mines of Famatima, for which purpose they entered into a contract with the government of Rioja, which granted the company the exclusive privilege of working the mines for twenty-one years. The conditions were, that the Quinto and Cobo duties should be reduced from eleven and a half to eight per cent.; that all the precious metals produced should be carried to the mint of Rioja, which that government was to establish, in order that it might undergo the process of coinage, unless the association chose to export from the province the metals upon rescate, when they were to pay additional duties of eight per cent. in lieu of the duties of seignorage. That the mining company should not be allowed to employ more than 200 foreigners; that it was not to establish retail shops for the use of those employed in the mines, but only wholesale stores; that it should be compelled to furnish quicksilver to the miners, at the rate of fifty dollars per quintal, but the miners were not to purchase it of the company could they procure it cheaper elsewhere; that the government of Rioja should be allowed to reserve 100 mines (pertenencias), over which it should possess an exclusive right; that on the termination of the contract

all the mines opened by the company, as well as all its rights over the mining territory, should revert into the hands of the government of Rioja, excepting twenty-five pertenencias, which the company was allowed to reserve in perpetuity. These terms were considered in Buenos Ayres very favourable to the company, as every body calculated with assurance upon the richness of the ores, and the certainty of realizing great advantages from the undertaking. The contract appeared to be no less advantageous to the government, inasmuch as it would put into activity all the energies of the small population of the province, and benefit the country beyond what could have been previously calculated upon. The government of the province lost no time in taking advantage of this bargain—it entered into a treaty with another company of merchants of Buenos Ayres, who agreed to advance 100,000 dollars to enable the government to work its hundred mines, for which it pledged itself to return silver piña, the produce of the mines, at the rate of seven dollars per marc, in payment of the sum advanced. This was considered advantageous to the company, inasmuch as silver piña usually fetches in Buenos Ayres nine and a half dollars per marc. But so many are the obstacles, delays, and vexations, and such the bad faith of these petty governments, that it is impossible to calculate with certainty on any results.

I have had frequent opportunities of seeing the Pampa Indians, having met with them both in Mendoza and Buenos Ayres—their complexion is very dark—their hair is very long, coarse, thick,

and black, generally hanging loosely over their faces, confined near the roots by a variously coloured band tied round the head; sometimes the hair is tied in a cluster on the crown of the head, and hangs loosely over their shoulders, and sometimes it is plaited into tails. Their eyes are black, animated, scowling, and are placed widely apart; their foreheads are low and broad; their faces are flattish; they have high cheek bones and large jaws; they have no beard, nor any hair on their breasts; they are muscular, athletic, ill-made, and rather of low stature. Their dress consists of a poncho doubled, wrapped round their waist, hanging down like a petticoat: it is kept in its place by a long sash of coloured worsted, passed several times round their bodies; into this sash on one side, and rather behind, they tuck their long pointed knife; they have neither shirt, vest, nor breeches. They generally wear a poncho, which hangs loosely over their shoulders; they have no shoes, but sometimes wear a sort of boot formed of the skin of a colt's leg skinned whole; it is worn upon the leg and foot, leaving the toes bare. The females are dressed in a similar manner, but are distinguished by their ornaments; and by their smaller wrists and ancles: their long black hair is plaited in two, sometimes in three tails, wrapped up in coloured worsted, and ornamented with coloured quills; one of these tails is brought over each ear, its end hanging over each shoulder, while the other is pendant on the back. They are very fond of large circular ear-rings of tin, which are sometimes large enough to touch their shoulders; they wear ornaments of tin and beads upon their wrists and ancles;

They wear a poncho round their shoulders, exposing one arm and part of the chest. Both men and women are excessively dirty, but it is not true, as some assert, that they grease their skins. Whenever they enter towns, they are not suffered to go armed; but in their predatory excursions they carry a lance, which, as well as their mode of warfare, has been described. The Indians never walk any distance, but always move about on horseback, and display great animation and activity: they are excellent horsemen, and will not hesitate to mount and ride the wildest steed, without being unhorsed. Some use saddles, but not all, for they ride as well without as with one: they can, when the horse is running at full speed, slip round, and suspend themselves under his belly, merely clinging by their hands and feet; and can regain their seat at pleasure, without checking the velocity of the animal. In the use of the lasso they are very expert; in like manner they are adepts in throwing of the bolas, a singular missile weapon, which will be described in another place.

These Indians are still in an early stage of a savage life, subsisting upon raw animal flesh, the preference given to that of mares above other animal is also highly esteemed. They lead a life of hunters wandering as necessity of food, having no fixed habitations, rary huts to protect them from the weather. They live in small being under objection of a re of two formed either placed tr arly, and meet-

ing in a point at top, surrounded by horse and ox hides to keep off the wind, or of three forked poles fixed upright in a line, at the distance of three or four feet in the ground, and a similar set fixed parallel to them at the distance of ten or twelve feet, long horizontal poles resting on the forks of the others; and upon these, to constitute a roof, a number of hides are thrown, and these shelter, in some degree, the miserable inmates from the wind and rain. They never cultivate the ground, neither do they apply themselves to any labour. They are very fond of getting intoxicated whenever they can obtain spirits, which they eagerly seek after, and purchase with ponchos and bridle-reins, which are prepared by the women. Polygamy is frequent among them, and a man may have as many wives as his activity will enable him to support; neither men nor women have much regard for their offspring. They have some crude notions of religion, but they have no worship: according to the accounts of the Jesuit Falkner their superstitions are very similar to those of the Indians of Chile; they believe in the existence of good and evil spirits, and practise incantations to appease the fury of the latter. The deceased are attended with some care; the flesh is cut off the bones and burned; the bones are bleached in the sun, wrapped up in the poncho of the deceased, and placed in a large grave, the usual cemetery of the tribe: the funeral is attended with a sort of rude wake, in which the relatives make frightful cries and lamentations, and get drunk whenever intoxicating liquor can be obtained. The usual burial places are near the sea coast or on the

banks of rivers. The horse of the deceased is generally killed and placed outside the grave. They have neither laws, nor rewards, nor punishments, but are subject to their hereditary chief, or cacique, whom they follow in war, in marauding expeditions, and in search of food. Such a race cannot be otherwise than boisterous, cruel, and ferocious: as they have no laws, their disputes are always settled by single combat, in which the knife is dexterously used in the right hand, while the left arm, enwrapped in a poncho, serves as a shield to ward off the blows of their adversary; one or the other generally falls a sacrifice in these combats. The women are the laborers of the community; they are far more active and less indolent than the men, and perform acts of drudgery which would be thought by them too irksome. They trade to Buenos Ayres any Mendoza in search of spirits, knives, bridle-bits, woollen-dyes, beads, &c.; for which they give in exchange salt, which they collect from the margins of their lakes, and which they sew up in little hide-bags; they bring also bridle-reins and lassos beautifully plaited with strips of green hide, skins of the panther, deer, fox, pole-cat, viscacha, and swans.

It may be interesting to give an account of a ceremonious interview which General San Martin had with some tribes of the Pampa Indians, to establish a treaty with them, and which displays much of their character: the circumstances were related to me by the General himself prior to his leaving Chile for Peru. The ceremonial upon the conclusion of the treaty was thus described:—The meeting took place several leagues to the southward of Mendoza.

The Cacique Maripan, accompanied by several hundred Indians, was mounted upon a white horse, trained for purposes of the kind; the animal had been taught to plunge and throw every muscle into a state of activity, feigning to advance forward while he scarcely moved from the spot: so slow was his advance, that he was fifteen minutes in moving over as many yards, during which time the Cacique made his harangue, and swore to perform inviolably the terms of the treaty; his sentences were short and energetic, raising his voice at the end of each, and placing great intonation upon the last syllable; his language was broken and guttural, and he paused between each short sentence, as if to gain breath; he was vociferous, and appeared to make considerable exertion in pronouncing his words, which towards their termination became a sort of yell: his action was so vehement that his features became distorted, and his body appeared to be convulsed.

The entertainment which the General had prepared for them now followed. A number of mares, and a quantity of aguardiente, was given to them, when they all set to with earnest intent upon the feast. The mares were killed, the blood being carefully preserved; the Indians arranged themselves in small circles, and squatted on the ground, the women acting as attendants upon the occasion: they fell to eating the raw horse-flesh with great voracity, seeming to relish with peculiar delight the viscera, partaking at intervals, in copious draughts, of their favourite beverage, horses' blood mixed with gin. They continued singing loud boisterous songs, the chief merit of which appeared to be the equal alter-

nations of the discordant notes. It was not long before all were drunk, when the riot became more boisterous, and continued great part of the night. The conduct of the women was remarkable; a strong party of them kept watch upon the cantonments, and looked sharply after the presents they had received from General San Martin, while the remainder made it their duty to act as stewards and servants of the feast, carefully abstaining from eating or drinking. Soon after the commencement of the feast, they cautiously removed the men's knives from their girdles, lest in the quarrels of the drunken moment they should set to fighting, as they are ever prone to do: the diligent attention and cautious policy of the women was equally conspicuous in many other points. Next day the men being sober, it fell to the lot of the women in their turn to enjoy their entertainment: they were now waited upon by the men, served with the same food, and regaled with the same horrible beverage, until they, like the men, got completely drunk, and like them also became noisy, turbulent, quarrelsome, and brutal in every possible way.

The object of the treaty was connected with the invasion of Chile under the joint forces of Generals San Martin and O'Higgins. The influence which this affair had in the final success of the brilliant enterprize, displays the diplomatic talent of the former General, for which he has ever been conspicuous. His object was to persuade Maripan that he was about to invade Chile by the southern pass of the Planchon, through which Maripan was to conduct his troops, and assist him with all the Indian force

he could collect together; and for which promise of assistance the Cacique demanded a thousand mares, a certain portion of aguardiente, beads, knives, &c. The General, however, gave him 1,500 mares, double the quantity of the stipulated presents, and a handsome scimitar, mounted with silver. It was arranged that Maripan should seek a private interview with the Spanish General Marco, in Chile, so as to deceive him as to his (San Martin's) schemes: to tell him that his intention was to engage Chile by the pass of the Patos and Uspallata, and enter the country by the valley of Aconcagua: and, to carry on this deception, the Patriot General promised to send skirmishing parties to keep up a continual feint. The Cacique swore to perform all these terms most faithfully; but San Martin, well aware of the treacherous spirit of the Indians, assured himself that the Cacique would go to Marco, and for another bribe betray him; thus calculating upon deceiving the Spanish General as to his real intentions. The enterprizing Chileno officer Rodriguez, a young man much esteemed by his countrymen, with a mere handful of men, kept possession of the pass of the Planchon, took the towns of San Fernando and Curico, kept the whole Spanish army in constant motion, and annoyed them greatly. He appeared, when least expected, at different points, and kept up a constant alarm: on one occasion, galloping singly into the public square of Santiago, he dismounted, and went up to a noted gaming-house, above the piazza, where the Spanish officers were wont to spend their evenings, and after gaming with them, he again

mounted his horse, and disappeared unknown, until, from the notice he left behind him, it was discovered who he was.

In the mean time, San Martin sent expresses by the nearer pass of Uspallata, with false dispatches, addressed in cypher, explanatory of his plans, to cross the Cordillera by the Planchon; and as all the bustle and seeming preparation was admirably kept up by Rodriguez, the Spanish General, Marco, became convinced that the treacherous relation of the Indian was true, and fully expected San Martin would attempt to enter Chile by the pass of the Planchon.

Marco therefore stationed his main force at Rancagua: when the expedition set off from Mendoza there was not a single officer or private that had the least knowledge of the pass by which they were to move until the moment they commenced their march. The patriot troops arrived in Aconcagua with so much precipitation as to fall unexpectedly upon the advanced guard of the Spaniards, and drove them across the impregnable cuesta of Chacabuco, which served as a barrier to all approach to the capital; and the "Army of the Andes," as the liberating force was called, arrived upon the plains of Chacabuco before the Spanish troops could be brought by forced marches from Rancagua: the consequences of this brilliant day are well known, and the detail of the action is given in the general history of the revolution.

The population of the provinces of the La Plata Federal Union has been greatly exaggerated. The

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shores forbidding; and its boasted mines placed out of the reach of all beings excepting Indians, who, to be made to work them, must be treated as beings inferior to dogs.

By dissolving the charm which, under the grossest deception, has smothered the earliest embryo development of the aboriginal people, the revolution, by calling forth the energies of the native Creoles, must gradually bring into action, and slowly expand into vigour, the natural resources of the soil. The true capabilities of these countries are of a very different cast from that which has been pictured by the Spaniards; a closer approach has deprived them of that dazzling mantle of gaudy tinsel, which, at a distance, excited the admiration of the credulous, and served to hide the native barrenness it was intended to conceal.

Whatever the resources of these provinces may some day become, they cannot be forced onwards beyond the ordinary pace observed in other countries, which must be quick or slow in proportion to the wisdom and liberality, or the bigotry and tyranny of its government: under the most favorable circumstances its riches can only be brought into light, and made productive of power and influence by the increase and illumination of its population. The progress of population must necessarily be very slow, unless assisted by emigration; and it remains to be seen what success the experiment now attempting in Buenos Ayres and Entre Rios will meet with. In the first outset misunderstandings have arisen from unforeseen difficulties. One of the greatest points which the government have to attend to, in case they

be really desirous of forwarding such measures, and of gaining the respect of the world, is the necessity of acting towards individuals with good faith and liberality—an axiom that seems to be beginning to be understood only in Buenos Ayres. One failure on the part of the government in this respect will require many years to re-establish a good opinion, and induce foreigners again to attempt the establishment of colonies.

CHAPTER VI.

MENDOZA TO SANTIAGO.

Journey over the great Chain of the Andes, by the Pass of Uspallata, including Observations, geological, botanical, and descriptive of this mountainous Country.—Hot Springs of Villa Vicencio.—The Parámillo.—Plains of Uspallata.—Valley of the Sonda.—River of San Juan.—Sonda Winds.—Showers of Sand.—Volcanic Formations.—Mines of San Pedro.—River of Mendoza.—Lasso Bridge.—Mountain Passes described.—Tambillitos.—Casas de los Indios.—Parámillo de Juan Pobre.—Peak of Tupungato.—Casuchas.—Guanaco Hunting.—Castle-formed Mountains.—Inca's Bridge.—Hot Springs.—Bezoar Stones.

On leaving Mendoza, the road lies through the suburbs and cultivated grounds, which extend above a league and a half to the northward. The route is then about N by E over the same description of Travesia, as that which lies between Mendoza and the Desaguadero already described. At the distance of five leagues, the road divides into two branches, one tending about NNE to San Juan, the other about NNW to Villa Vicencio. Where the road separates, a low branch of the Paramillo range of mountains juts into the plain, and approaches within one league of the road; it is a lime-stone formation, and is quarried for the purpose of supplying the town of Mendoza with lime, and hence is called the Calera. Two leagues further we approach the foot of a detached low series of hills, called the Los

Cerrillos, and, passing to the westward of them, the road gradually leads towards the Cordillera range. Thus far the road is sandy; but about a league before reaching the Cerrillos, it begins to be stony, and continues more or less so till we reach the Cordillera, for over this part of the Travesia, the currents of water flowing from the three extensive ravines of Villa Vicencio, of the Higuera, and of Canota, have spread over its whole surface immense quantities of the sharp angular fragments of stone that accompany the alluvial matter brought down from the hills by the torrents during the rainy season. From the Cerrillos, the course tends for three leagues in a WNW direction, towards an opening in the mountain range, in which there is a small spring of water, this is at a place called El Coral Viejo. We now enter a ravine; the hills on each side are at first of inconsiderable height, but as we advance, the valley becomes narrow and more stony; its bed is covered with bushes of hanilla, retamo, verbena, &c. Higher up this narrow ravine, the mountain ranges are of considerable height; and, at the distance of fifteen leagues from Mendoza, we reach the post-house of Villa Vicencio. The hills are of hornblende slate, including seams and fissures filled with sulphate and carbonate of lime. Following up the course of this lateral branch of the main ravine, to the source of the brook, we find, at the distance of a mile and a half, the hot springs of Villa Vicencio: the intermediate ravine is narrow, and enclosed on each side by very lofty hills; its tortuous bed is filled by a kind of tufa, an alluvial deposit of sandy marl, indurated by a considerable admixture of the carbonate

and sulphate of lime, encrusted upon twigs and bushes, washed from the hills by the mountain torrents. At the head of the ravine, the little brook falls over a craggged precipitous rock, and forms a small but picturesque cascade; it is necessary to scramble up this rock to reach the baths, which are situated in a beautiful little amphitheatre, bounded on all sides by lofty mountains. The baths are shallow pools, dug out of the tufa, about eight feet in diameter, and two feet deep; from the bottom of each flows a small spring, so that the water of every one of them is distinct, the quantity which flows into each is exceedingly small. There are five of these springs: of the first and highest, in the month of October, when the thermometer in the shade stood at sixty-six degrees Fahrenheit, the temperature was ninety-six degrees; of the second it was eighty-eight degrees; of the third ninety-two degrees; of the fourth eighty-nine degrees; of the fifth seventy-five degrees. The water of these springs has no peculiar taste or smell, but there arises from the bottom of each bason considerable portions of gas, which gives them the appearance of boiling. I had with me no re-agents with which to examine the nature of these mineral waters; but I apprehend the air that arises is simply carbonic acid gas, which is the more probable, as I observed a dead frog floating in one of the pools. At about fifty yards distant from the huts of Villa Vicencio are the ruins of old buildings, formerly the smelting works for the reduction of the silver ores of a mine in the Paramillo range: this place was selected as the nearest to Mendoza, where water

and fuel could be found, although it is eight leagues distant from the mines whither the ore was brought on the backs of mules. The foundation walls alone exist, they are constructed of rude fragments of stone, cemented with mud: much scoriæ and refuse lies around. I could, however, no where perceive the vestiges of a trapiche, or water-mill, for the pulverization of the ores. Although there is nothing particular about this place, either as to scenery or productions, deserving of particular notice, still the change of situation is so contrasted with the unvaried country hitherto seen on the road from Buenos Ayres, that, however uninteresting in itself, every object is viewed by the traveller with great curiosity and indescribable pleasure. The height of this place above the level of the sea is 5382 feet, and above Mendoza 2780 feet: it is extremely bleak in the winter season, and at all times very subject to storms: snow falls here generally during the winter months.

On leaving Villa Vicencio, we turn out of the ravine and enter another, which is in fact the main valley. The road continues to wind sometimes NE., at others WSW, along the narrow bed of the valley, which is covered with bushes of jarilla, retamo, verbenas, algarrobas, lyciums, &c., and is bounded by lofty impending rocks, partly bare, but mostly covered with soil thinly scattered over with bushes, cacti, and many plants deserving of notice. One spot on this road is remarkable for the abundant growth, on the hills as well as in the valley, of a dipsacus, which resembles our common

teazel; the spot is in consequence called the Cardal by the muleteers: here, as well as at many intervals of a mile or two, are found on the sides of the hills a little pool of water, supplied from a diminutive though never-failing spring. These places are known only to the arrieros, they have each their proper name, and are used as resting places for the troops of mules which are continually travelling to and from Chile. The hills are pretty well covered with pasture, which in these mountainous countries must not be supposed to mean those beautiful grassy swards with which our hills at home are every where covered, but to signify small plants of many kinds. Here the cattle devour every vegetable substance, even bushes, when all other plants fail. It is not, therefore, from the richness of the pasture that these recesses are of value to the Mendozinos, but from the security they offer for breeding cattle; in many places among the hills we perceive many herds. The mountains are so steep and lofty that the sun which rises in the plains at five o'clock does not shine in these vallies till nearly eight in the morning; they seem principally composed of hornblende slate. At the distance of a league from the post-house we pass an angle, remarkable for a lofty mountain, whose precipitous rocky face is covered with a species of lichen, which gives to it a golden hue when the sun shines on it; hence its name El Cerro Dorado, the Golden Mountain. At the distance of another league the valley becomes more contracted, the impending rocks grow more precipitous and bare until we enter the narrow pass of the Angostura, the access to which is over barren

rocks from among which issue little springs of fresh water. The sides of Angostura are perpendicular, to the height of from 200 to 300 feet; its length is about 250 yards, and its breadth about seven yards. The geological formation of the whole ravine is similar to that about Villa Vicencio; and the whole length of the valley, up to its origin, is in like manner filled with a similar tufa, which, in many places, is covered with a saline efflorescence. Pursuing the course of the ravine two leagues further, we reach the Alojamiento de los Hornillos, where there is a small hut like that of Villa Vicencio, and a never-failing spring of water: here, as its name implies, existed formerly works for reducing the ores from the San Pedro mines.

From this place we begin to ascend the Paramillo, which is the name given to a very long and narrow mountainous ridge, lying between the plain of Uspallata and Mendoza: it is evidently of very different formation from the more western, or main Cordillera, and is said to run independly of it. The path up the ascent is gradual and winding, and on reaching the summit of the first height, we have presented to us a beautiful view of the distant plains, in the midst of which Mendoza is easily distinguished at the distance of above forty miles, in a straight line. The breadth of the summit is several leagues in extent, and is broken into numerous undulating risings and descents: the botanical novelties are not very numerous, nor very remarkable. I observed, however, a new hoffmansaggia, different from that of Mendoza or Aconcagua.

I regret that I could not determine the height of

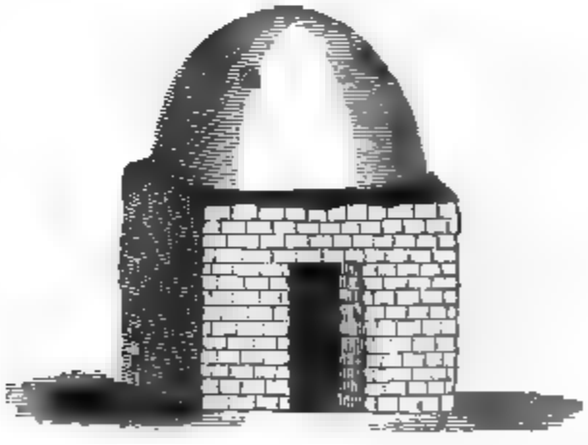
the Paramillo, being prevented by the occurrence of a violent temporal, though in the valleys below a fine sunshine reigned. I have crossed the Paramillo four times, and on every occasion I have met with squally weather: hardly a day passes without rain, though it be but a few drops, and wind is never wanting on this inhospitable spot. The course over the Paramillo is nearly west: the descent, which is comparatively very trifling, leads to the head of a narrow ravine, the bed of which we follow; and, at the distance of about a league, pass by the mines of San Pedro, better known as the mines of Uspallata, which have been several years neglected for want of capital. I shall speak more particularly of these mines in another place.

The hornblend slates are now gradually succeeded by clay slates, in which are found veins of an argentiferous galena. These clay slate formations are very extensive, and assume various appearances: among them is a considerable stratification of a kind of bituminous shale, which the natives call carbon de piedra, sea coal. Many have assured me that sea coal does really exist in this range, but I could no where gain any intelligence as to its locality, and therefore doubt its existence. At an estate called Curizal, in the southern extremity of the Paramillo range to the southward of Mendoza, there issues from a spring a bituminous pitch, which, by exposure to the air, solidifies. This deposition is from time to time carried down into some low grounds by the rains; and a considerable quantity of this mineral pitch has collected in flakes. The clay slates are succeeded by chlorite slates, talcous slates,

primitive slates, and new serpentines of various colours, all stratified, and mostly in a state of decomposition. The course of the numerous ramifications of the mountains, branching from the Paramillo into the plain of Uspallata, is about NW.

The post-house of Uspallata lies in a direct line SW from the San Pedro mines; and our course towards it is over several low mountain ranges, the gullies between which form many rios secos, (dry rivers) being in fact, merely the water courses during the rainy season, filled with coarse detrites of decomposed slate rocks, and covered in many places with a saline efflorescence: in two of these valleys are found little pools of fresh spring water, el Ague del Zorro being two miles, and del Guanaco seven miles and a half from San Pedro, which is likewise gifted with a similar spring; and these are the only places where water can be procured before reaching Uspallata. Each of these springs, I imagine, does not produce more water than is sufficient for the maintenance of two families. The last formations that skirt the exit from this range into the Uspallata plains is of a fine gritstone, containing much argillaceous earth and black particles, probably of bituminous shale; it assumes many shades, is stratified, dips at various angles and different points towards the horizon. As we enter the plain, several of the formations become isolated; they are more porphyritic in their structure, of different colours—green, brown, ochreous, black: some of these strata are nearly vertical, others dip at an angle of 40° with the horizon. The course now becomes SSW, the plain is covered with barren sand, destitute of water,

and of all vegetation save a few low bushes of jarillo, retamo, acacia, &c. We soon pass over a low and narrow ledge of rocks, of fine grained argillaceous gritstone, called la Puente de Piedra, and continue to travel over the same arid travesia, until, at the distance of five miles we arrive at the post-house of Uspallata. A mile before we reach it we pass by las Bobidas—the smelting works of the San Pedro mines, to the detail of which we shall presently return. The post-house is seated on the edge of the river of Uspallata, an insignificant stream, which takes its rise from the Cordillera, and enters the valley at a point north-westward of the post-house. This stream runs to the southward, and falls into the river Mendoza. The post-house consists of three small huts, built of sun-dried bricks, one of which has a boveda, or cupola roof, of the same materials, which are thus constructed on account of the scarcity of the usual materials employed in roofing houses.



The others are square, thatched with grass; one being used as the cooking-place, the other as the post-house; the latter is plastered with mud, and whitewashed with fine pipeclay, brought from the

Paramillo range. At a little distance are two or three miserable huts, which formerly appear to have been used as furnaces, afterwards converted into dwellings, and since deserted. The altitude of this place above the level of the sea, according to barometrical observations, is 5970 feet.

I have hitherto spoken only of the road from Mendoza, through Villa Vicencio: there are two other passes leading to Uspallata, which, although shorter, present more stony roads, and a still higher Paramillo to cross over. I have passed by one of these, called the Canota road, which is far more interesting than that of Villa Vicencio. Few people take this road, as it is necessary to complete the whole stage, twenty-eight leagues, in one day. There is water in the whole distance, except at a spot six leagues from Mendoza; it is therefore impossible to proceed with loaded mules by this pass. We here meet with formations of newer serpentines, primitive slates, talcous slates, chlorite slates, and clay slates. The serpentines are extremely various in their colours—light-green, dark-green, apple, and pea-green—green of all shades.

Singular, indeed, is the succession of immense rocky barriers, perfectly destitute of vegetation. I was assured by the muleteer who accompanied me, that in the still more southern pass is a mountain of bright azure blue, probably a serpentine. This class of rocks lies eastward of the slates. I observed also several formations of steatite, enclosing veins of asbestos; thence follow the hornblend rocks, containing asbestos, gypsum, and carbonate of lime, which form the ascent of the Paramillo, at the foot

of which is a small natural cave; the ascent is steeper and higher than that of San Pedro, so likewise is its descent on the opposite side; here, in November, near midsummer, as well as on the summit of the other road which I crossed in the same month, I encountered heavy falls of snow. On accomplishing the descent towards the east, we pass along a ravine, in the midst of which the road presents on one side a singular formation; its sides are quite perpendicular to the height of 300 feet, exhibiting square, horizontal, and perpendicular fissures, as if the arrangement had been the work of masonry, upon a gigantic scale. The exit from this ravine opens into the Mendozine plain, near the Calera range, eight leagues to the northward of Mendoza.

In the Canota range, among the slaty formations, their rugged summits, in many places to a great extent, are covered with a stratum of considerable thickness, apparently an indurated earthy deposit of comparatively recent formation, as its horizontal disposition upon older inequalities of the under rocks point out.

The plain of Uspallata is a barren desert, of considerable extent, upon which grow low bushes of jarillo, acacias, retamo, &c. which are thinly scattered over its surface; the soil is sandy, arid, and in some places gravelly; it is wholly incapable of cultivation, except to a small extent on the borders of the rivulet where it can be irrigated. The breadth of the valley is about five leagues; its length has not been accurately ascertained, but it is known to extend sixty leagues. It seems as I have before stated, that the chain of the Paramillo is no where connected in

these latitudes with the main Cordillera. It proceeds from the grand branching chain which extends into the Brazilian territory, and separates Upper Peru from the unexplored country, in which are several of the sources of the river Amazon.

In how many places this chain has been cut through by the water flowing from the Cordillera, we are, as yet, uninformed, but we are certain that it is so intersected in two places by very narrow, and almost perpendicular fissures, through one of which passes the river San Juan, and through the other that of Mendoza. These channels in some places are so very confined, rocky, and precipitous, that they are impassable by man or beast. A story is current among the best informed natives of Mendoza, which, perhaps, is somewhat traditionary, that before the period of the Spanish conquest, the Peruvian Incas had a custom of visiting every three years the provinces of Aconcagua, from which they used to derive great part of the supplies necessary for the maintenance of the northern provinces; the object of the visit being to make such regulations as should ensure the requisite order and good-will among the colonists they had planted here. These visits were conducted with great pomp. The road continued as far as Uspallata, for 300 leagues along this narrow intermountainous band of level ground, without any hill of considerable height to oppose the march. From Uspallata the road followed the course of Las Vacas, which we shall have to describe. General San Martin has often assured me that the account might be relied upon, for he had caused it to be surveyed for a considerable extent, having at one time the

idea of attempting the invasion of Peru by the "road of the Incas." The report was very favourable as to the level state of the road, which, moreover, presented at certain distant intervals little springs of water. It is said that this road was much travelled by the Peruvians in the conveyance of maize for the maintenance of the mining districts from Aconcagua by means of Llamas and Alpacos.

This mountain range throughout its whole extent is secondary, and bears many marks of volcanic origin. Mines of sulphur and aluminous slates are very frequent. I am assured, in the vicinity of these formations mines of silver, but more especially of gold, are principally to be met with: we have, for instance, the mines of Uspallata, the silver and gold mines of San Juan, those of Fanmatira, of Lipez, and others.

While upon the subject of roads, I shall describe that leading from Uspallata to San Juan. This road follows the course we have passed over six miles beyond La Puento de Piedra, when it continues a northerly course, while that of San Piedro assumes a more westerly direction: it skirts the barren plain for ten leagues; where, at a spot called Jaquel, there is a little pool of spring water. We enter a ravine, at the head of which water is again found; we then pass over the Paramo, which here goes by the name of the Cerro Negro, and the road leads down a ravine on the opposite side, till we arrive at the small spring of the Pozito, a distance of sixteen leagues: here we enter the valley of the Sonda, which is formed by a parallel ramification of the Paramo, tending northward. This valley is

similar to that of Uspallata, but is much narrower; it finishes with the termination of the fork, whose base is washed by the river of San Juan. During the rainy season a great body of water falls from the surrounding hills into the valley of the Sonda, which does not find its way towards the termination of the valley into the river of San Juan, but finds an exit through a fissure in the fork of the Sonda, which it has cleft perpendicularly: this fissure is called La Flecha, and through it the road leads in a more direct course to the town of San Juan. At the distance of eight leagues from the Pozito is another supply of water, called La Azequia; the distance thence to the Flecha is ten leagues.

The Flecha is represented to be nearly a league in length; its direction nearly straight; its sides nearly perpendicular, and the rock which is thus singularly cleft is black, and is said to bear a great resemblance to the perpendicular formations of La Jaula, which I conceive to be a basaltic porphyry. Little dependance is to be placed upon the information of the natives to guide us in specific distinctions of any kind, and the same uncertainty exists as to their notions of distance. The breadth of the pass of La Flecha is about forty yards; the bottom is level and presents an excellent road, formed by the deposition of gravelly and finer slaty fragments brought down by the rains. Leaving this pass we quit the mountains, and at the distance of three leagues reach the town of San Juan, seated upon the river of that name. This river derives its sources from the central ridges of the Cordillera, to the northward of the Volcan de Aconcagua, and, as

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flowed into the Mendozine plain upon the estates of the Tortoral, and probably once united itself with the river Tunuyan. It is not unlikely that an eruption of the volcano blocked up this course, and that a vast lake in consequence filled the plain of Uspallata, until the river forced itself a new channel across the Paramillo by the cleft or fissure now seen, the sides of which are nearly perpendicular.

We will now return to the mines and smelting operations of Uspallata. I have already described the precise situation of the San Pedro mines: the mountain is a brown indurated clay slate, the principal shaft being opened on the south-western side, very near a summit that forms the highest point of this lateral ridge of the Paramo. In all the South American mines, the descent to the workings is never effected by a perpendicular shaft, but by an inclined gallery, or contracted passage, so low as to oblige the workmen to stoop nearly on their knees. The ore is extracted by means of crow bars. The excavators are called barreteros; the carrying peons capacheros. The ore is carried to the mouth of the gallery in hide vessels called capachos, and is brought down by mules to the foot of the mountains, whence it is conveyed in hide tubs to the smelting place.

I greatly regretted that I could not visit the mines; but I saw in Uspallata a considerable quantity of the ore there collected, from which I had a good opportunity of judging of its quality. It seems to be wholly an argentiferous galena (a combination of sulphur with lead, containing a small portion of silver, a kind of ore greatly resembling our Cumberland lead ores); here and there it was interspersed

have, however, much stronger evidence that an extinct volcano existed near Mendoza, for large masses of fine light pumice stone are brought in quantities to this town, for making filtering stones, without the use of which the muddy river water would scarcely be drinkable; and these stones are not only in general use among the poor as well as the rich, but their manufacture forms an article of export to the neighbouring provinces. This pumice-stone is of a very different texture from that which proceeds from our European volcanoes: it is much lighter, more easily friable, and appears more granular, and of a lighter gray: it has nothing of the striated vesicular texture; it is more composed of sandy grains, but slightly agglutinated. It is of the kind called trachytic pumice, and contains grains of mica, and crystals of augite. This pumice stone is brought from the interior of the Cordillera, from a quarry in one of the ravines that fall into the river Tunuyan, but I could gain no precise information, as my stay in Mendoza was so short, and I met with no one who had been at the spot. These are subjects, however, that claim particular inquiry, as they may lead to the denouement of very interesting facts in a region hitherto quite unexplored by observant and inquisitive travellers.

I have marked in the map the spot in which I conceive this extinct volcano to be situated. From all the information I could collect, I conclude that the river of Mendoza once flowed through its ancient bed, which was a ravine lying between that branch of the Cordillera in which the volcano is situated and the termination of the Paramillo range, that it

flowed into the Mendozine plain upon the estates of the Tortoral, and probably once united itself with the river Tunuyan. It is not unlikely that an eruption of the volcano blocked up this course, and that a vast lake in consequence filled the plain of Uspallata, until the river forced itself a new channel across the Paramillo by the cleft or fissure now seen, the sides of which are nearly perpendicular.

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with thin veins of black sulphuretted silver and of grey silver ore. The mines were worked by a Mendozino named Molina, who, with an old Spaniard and another native, had associated themselves together in the speculation. I saw this Molina at the Bobedas of Uspallata; he appeared to be a very sensible man, and explained every part of the works without the least reserve, and with the utmost civility: he was pleased with my curiosity, and appeared anxious to satisfy my inquiries in every particular. Unfortunately, I was not aware that these smelting operations were going forward, or I would have directed my arriero to have stopped; as it was, I was obliged to hurry away, and though I did not stay here ten minutes, and galloped after my arriero, I did not come up with him until after I had passed the Puente de Piedra: in these deserts it is dangerous to lose sight of the muleteer; had I stayed another five minutes, I should probably have mistaken the path leading to San Juan instead of that to Villa Vicencio, whither we were directing our course: but as I was previously acquainted with the means followed in Chile in the reduction of the silver ore, a mere glimpse of the arrangements put me at once into possession of the whole process followed here: as the modes adopted in the reduction of silver ore are all alike, the description of one may serve as a good example of the whole. I shall therefore, in a chapter on the mines, enter into a full detail on the whole process.

Leaving Uspallata, we continue our course across the sandy desert; at intervals we see little eminences presenting much of the appearance of red sand-stone,

or rather a loose breccia; at the distance of four leagues we reach the Rio Seco, which leads down to the river of Mendoza, along the bed of which we travel for another four leagues, crossing at the commencement a rivulet called Los Chacayes, which takes its rise from the Cordillera a little to the northward. The river of Mendoza is here tolerably rapid; its stream is only about thirty yards wide, though it runs on a bed from 400 to 500 yards in width, and about 300 feet below the level of the valley, its banks being perpendicular on each side for 200 feet: as we pass along the river bed for above twelve miles before we leave the plains of Uspallata, we see, in the section presented to our view, a fair sample of the bed of the whole of this immense valley, which is formed of large rounded stones, the interstices between which are filled up with alluvial sand: those in the lower part are of immense size; those in the upper part are somewhat smaller. The same kind of deposition appears as far as the Punta de las Vacas, within the great ravine or valley of Las Cuevas, down which the river flows from its first source. A question naturally arises whence came so immense a congregation of stones, so large, all rouded and water-worn? Certainly they never could have been here deposited by the action of the present stream. Is it an improbable conjecture that a large lake once filled the plain of Uspallata; that rivers of infinitely greater flow once poured into it from the valley of Las Cuevas, to whose ravaging torrents we owe the disrupture and attrition, as well as the congregation, of this vast accumulation of rounded stones, which for the most part are of sienite and

of elenite porphyries? The remarkable table heights, now the summit levels of these immense depositions, must then have been the bed of such rivers: the Paramo mountains, which constitute the eastern boundary of this vast lake, in the place of which the rivers of Mendoza and San Juan now flow, seem to favor this conjecture; and the convulsion that produced the remarkable fissures in this immense barrier must have caused the drainage of so vast a body of water. The lower level at which the exit would be effected must naturally have caused the river to work out for itself a new bed below the line of the former bed, which, as it was worn down, would cause the old river bottom to assume the appearance of such a series of table heights as are now seen in the valley of Las Vacas, as well as the vast sandy plains of Uspallata, which have been evidently raised on a basis of congregated river detritus of immense magnitude and extent, and of considerable depth.

I have before said that in traversing the valley of Uspallata towards the south-west we passed along the river bed for four leagues, when we came within the two extreme points which form the entrance into the valley of Las Cuevas; we here cross the river Picheuta, which, though an insignificant rivulet during great part of the year, brings down a considerable body of water at the time of its inundation, caused by the melting snows in the summer season, so as to render the river dangerous to be forded, not so much from the depth of water as from the great declivity and consequent rapidity of its current, from which, and from the bottom being

formed of large rounded loose stones, it is difficult for the mules to find a secure footing. If they lose their feet they are sometimes carried down the stream into the great river below, whence there is no escape. At these periods it is not unusual for the Mendozine muleteers to construct over this stream a very rude and dangerous kind of suspension bridge, from materials brought for the purpose from Mendoza. This was the case last year, and I met in the Cordillera numerous troops of mules, laden with soap, on the way to Chile, which had passed over with their loads. The bridge was formed of three lassos, or hide ropes, one twisted round each end, and one round the middles of a number of straight poplar shoots placed close together; the ends of these thongs were coiled round short stakes driven in the margin of the perpendicular banks of the river, so as to form a kind of curved platform of the length of about fourteen feet, and five feet wide. I determined, from motives of curiosity, to cross this bridge, and though the river was not easily fordable, our mules, with their burdens, were sent through the stream in safety.

I found the bridge had a violent sideway oscillatory and unsteady motion, and that by any partial treading on either side of the precise centre, the platform had a tendency to incline that way, and throw off its load. Not finding my footing secure, I crawled over on my hands and knees; the peon who followed me ran a narrow escape of falling, but his companion stood ready, on the margin of the stream, with his lasso already thrown across his chest, to prevent his being carried away by the stream in

the event of his falling: his fear evidently added to his insecurity. A week before this, the river was not fordable, and notwithstanding the great caution used in passing the mules over the bridge, two of the beasts had fallen into the stream, from which they were extricated by the muleteers by the expert use of their lassos. The lasso bridge to be described is very different to this in point of structure, steadiness, and security.

This happens only in years of extraordinary floods, and then only from the middle of December to the middle of January. When General San Martin was preparing for the invasion of Chile, he built here two rude forts, which he furnished with several pieces of cannon; the remains of these forts are still to be seen. Here too the government of Mendoza generally stations a guard for the examination of passports of all travellers. This guard is generally kept during eight months in the year: it consists of two individuals who remain exposed to all sorts of privation, without a house or shelter of any kind to protect them from the cold bleak winds that pour down the valley. We have here a specimen of the natural habits of these people, who are really too lazy to devote a few hours' labour to the construction of a hovel, though abundance of materials lie scattered a few yards around them. We may judge of the debased condition of a people who prefer living in the open air like brutes, passing the long day under the scorching heat of an almost vertical sun, and lying at night exposed upon the bare ground to the bleak winds: they have no employment except smoking, drinking, and gambling: the only shelter

they raise for themselves against the violent storms of hail, rain, and lightning which, during great part of the year, happens after sun-set, is merely a bullock's hide, one end of which is raised two feet from the ground by means of a few stones piled up; under this they creep for refuge. Passing by the point of the mountain range called Cerro Blanco, we enter a valley bounded on each side by lofty chains of hills. The first two leagues we pass alternately on the river bed and on the elevated table height before alluded to, until we reach the Ladera de las Cantaderas, the first of those dangerous passes which by all travellers and historians have been described as productive of dreadful terror and of imminent danger. I have before mentioned that an elevated table height extends along the whole course of the valley, up to the very foot of the great range of the Cordillera, the height being about 200 feet above the stream: the width of the valley is about a quarter of a mile: the river has worked its present course through this vast deposition in a serpentine direction. In some places it has bounded from one side of the mountain barrier to the other, undermining and carrying away such parts of the ancient alluvial deposits as impeded its progress: at these angles, therefore, the road along the table level is interrupted, and paths have been cut in the steep perpendicular sides of the original boundary of the valley, or in the narrow remains of the old alluvium: wherever the original rock presents itself we find it half disintegrated, and in a state of decomposition. The first of these interruptions of the table height constitutes one of the most dreadful of the Passos de

Piligro: the pass of the Cortaderas has been wrought along the tortuous mountain sides for about two miles, sometimes ascending, sometimes descending, sometimes the path is pretty broad, sometimes narrow. For the most part the exposed mountain side is every where in a decomposing state, splitting into numerous angular fragments, which are brought down by the rains: the accumulation of these fragments form a steep inclined plane, on which the road has been cut; as new heaps are every year brought down by the rains, the path, at the commencement of the season, is partly covered with these fragments, which not only hurt the feet of the mules, but, from their looseness, render their step less sure. As the season advances, the continued traffic of mules makes the path as solid and well trodden as the older parts of the road. The pass is in many places very broad, in the narrowest not less than five or six feet, except perhaps in places where we meet with an inclined shelving of loose stones, such as has just been described, over which the passage is as secure as on the regular track. The accounts we hear of the passes are, that "they are so narrow and dangerous, that a man on horseback can with difficulty pass them." "It is (meaning the whole road over the Cordillera) so narrow and inconvenient," says Molina, "that in many places travellers are obliged to quit their mules, the only animal that can be employed, and to proceed on foot: nor does a year pass when some loaded mules are not precipitated from the roads into the stream below." It will be seen how exaggerated are the whole of such statements. On my arrival in Buenos Ayres, I was told

by every body, natives as well as foreigners, that the road was on the brink of a lofty precipice, so high, that the thundering river which washed its base could scarcely be discerned by the eye, and that the overhanging precipice was equally lofty: every traveller, in fact, was obliged to alight from his mule, and cling to the mountain side, lest he should miss his footstep, when he would be hurled down, and inevitably be dashed to pieces. In the narrowest parts of this pass the road is not less than five feet wide, but as most loaded mules keep as near the edge of the path as possible, to prevent their loads touching any projecting point in the mountain side, the saddled mules instinctively follow the beaten track, and the rider need have little fear, for he may rest assured that his beast will never step unless it feels that it has a firm footing: no animal can display more cautiousness than a mule, it is always on its guard: though slow in movement, it may, when left to itself, be safely trusted. A timid person naturally feels great apprehension in having one leg hanging over the sloping steep, fearful lest the bank should give way, when he would be precipitated to the bottom. To a female, however, the apprehension of danger is even greater; for, seated in a sillon, both her feet are necessarily hanging over the steep, and her face fronts the deep abyss. There is, however, but little danger, from the sufficient width of the road, and the sure-footedness of the mule. The mountain side is not quite perpendicular, and generally presents gradually shelving sides, the angular fragments of which form secure wedges, supporting each other at an inclination which pre-

vents them from sliding down. On arriving at one of the inward angular turns of this path, we have presented to us a somewhat picturesque scene; the mountain side above us, overhanging the angle, is nearly perpendicular to the height of 100 feet, from the summit of which a little spring of water falls in a broken cascade, dashing from point to point of the projecting rock.

At another turn we perceive on the edge of the path an immense block of porphyry, eight feet in diameter, on which is affixed a small wooden cross, bearing an inscription—"Santiago de Molina, 5 Feb. de 1790," in remembrance of a workman of that name, who was killed there by the falling of this stone from above, at the time when the present road was cut: this was one of the many useful works of Don Ambrosio O'Higgins, when he was President of Chile, a man who ought to be gratefully remembered by the Chilenos as well as Peruvians, since the greater part of their most useful public works was executed during the time that he wielded the authority of the King of Spain over those countries. At length we regain the table height, it continues to form a good level road till we reach the Tambillitos, so called from the ruins or foundations of houses once existing there. At several intervals in the Cordillera we meet with similar places, which the arrieros tell us are the Casas de los Indios, the resting places of the ancient Peruvians, during their marches to Chile: others again assert, and I think with more reason, that they were the corals of the Asentistos, or slave

company, who in carrying troops of negroes to Chile for sale, used to put them in separate pens, where, being ironed and guarded, they were prevented from attempting to escape: this is the more probable, for several of the pens have no doors, are square, and just long enough to admit of a man lying down, and are divided from each other by low walls, four feet high, constructed of stones loosely piled on each other, and without any roofs: other well-informed natives assured me they were really the resting places of the Indians. One of them, an officer employed to survey the Inca's road to Potosi before mentioned, states that similar structures are there frequently met with, many of which are equally rude with those seen on the high road to Chile, while others present grotesque carvings in stone: if such be the case, the vulgar opinion must be correct; but, be this as it may, they offer nothing remarkable or worthy of particular notice. The number of pens is about twenty, though formerly they must have been more numerous. The Alojamianto is prettily situated, close to a small brook, which rises in a ravine in the mountain barrier. The formations met with previous to our arrival at this spot have been chiefly red felspar porphyries, particularly the red and brown varieties, in which regular crystals of felspar and of quartz are imbedded, the basis occurring sometimes fine grained enough to assume the appearance of jasper.

The altitude of the Tambillitos, according to barometrical admeasurement, is 6250 feet above the level of the sea. After leaving the Tambillitos, we

meet with the same excellent and level road for another league, when we arrive at the celebrated Ladera de la Jaula, another of these terrible passes which have excited so much apprehension. This pass is formed like the other, but it presents more of the remains of the ancient stony deposite, which in some places overhangs the path in a perpendicular wall of the height of twenty to fifty feet: here are rounded blocks of porphyry of many tons weight projecting three or four feet beyond the wall; the fear lest they should fall excites apprehension in a timid mind, but they are too firmly wedged, and too well imbedded to descend from their secure resting places. This path is not so long as the Cortaderas, it has a firmer road, although the shelving side below the road is more precipitous: the road is in no place less than six feet in breadth, and finally leads down to the bed of the river, at which point we perceive in the perpendicular wall of alluvial deposite over our heads several large vacuities capable of containing a great number of persons standing upright: these caves have given to the Ladera the name of La Jaula, the cages. The height of the highest part of the Ladera is not more, I imagine, than 300 feet above the level of the river—the highest part of the impending wall above the road not above sixty feet. The road now continues for some distance along the bed of the river. At the distance of four miles we reach the Alojamiento of the Polvaderas, where we perceive formations of black basaltic porphyry—at least it presents walls in many places quite perpendicular, and has a disposi-

tion to a columnar fracture, nothing however approaching to the regularity and articulation of basalt; we here ascend the table height, and arrive at the Peñon Rajado, the shivered rock. The formations still continue of blackish rock, which does not decompose into earth, but its surface splits off in angular blocks, some of which are of common size, while others are in small fragments. Vegetation now becomes lost in the hills; all seems wild and barren. One of the blocks that have been hurled from above lies in the middle of this level flat: when I first saw it, it was somewhat of a quadrangular form, divided by two vertical fissures, into four sections, one of which has since become inclined. The arrieros have a marvellous story attached to it: it is the Piedra del Inca, the Inca's stone, upon which the Emperor of Peru, in his triennial visits to Chile, is said to have performed some religious ceremonies; at the period of the dissolution of the monarchy of the Incas this stone suddenly became shivered by supernatural agency, and will again become united when the empire of the Incas shall be restored.

As we advance, the rocks become more splintery: we see in many places large shelving accumulations of small angular fragments from the surface of the rock, burying the base of the mountain sides; these shelving heaps are often 500 feet in height, as steep as the fragments can lie on each other, for the rock does not decompose into fine earth; the sides of the hills being therefore no longer clothed with the spare vegetation hitherto seen, this rugged and contracted valley has a more sombre and barren ap-

pearance than can well be imagined: proceeding on we pass the small brook of the Arroyo del Peñon, and the springs of the Manantiales, where the table height becomes somewhat contracted, and covered with sharp angular fragments, which have fallen from the impending rocks. We now approach the Paramillo de Juan Pobre, a lateral extension of the mountain across the valley, which once must have presented a barrier against the river, which in progress of time has gradually worked for itself a narrow channel on the southern side of the valley, where it has opened a fissure, having almost perpendicular sides. The Paramillo appears to be composed of a kind of trap porphyry, whose surface decomposes into numerous shivery fragments, with a tendency to fall into a yellowish ochrey earth, almost destitute of vegetation. The road winds up its eastern and northern sides: from the summit we have a view of the surrounding lofty and craggy pinnacles wholly bare of soil: the scenery, though grand, exhibits in no degree those magnificent views which, from the description given of the Cordillera, we are given to expect. All the objects which nature here presents to us are too close to be agreeable, and on too large a scale to suit our visual fancy; we are buried in the depth of a ravine, where even our present elevation does not relieve us from the tedious want of variety in the impending barren crags every where surrounding us: we look in vain for those varied outlines, the beautiful perspectives, the endless retrocession of distant objects—those charming picturesque views, which at every step call forth our admiration in the Alpine scenery of Europe. A general gloom pervades the whole;

there is, in fine, nothing either to strike the fancy, or to excite any of those pleasurable associations of the romantic and the beautiful, which alone can render stupendous mountain scenery agreeable.

The altitude of the highest point of the road over the Paramillo, according to barometrical admeasurement, is 7888 feet above the level of the sea, or 508 feet above the western foot of the hill. The descent from the Paramillo winds down the western side, where in many places it is both steep and stony; it leads down to the river bed: some barometrical observations made here indicated the height of this place to be 7380 feet above the level of the sea. Passing along the river bed, the distance of a mile, we perceive, on the opposite side of the stream, the Rio Blanco, which derives its source from the opening here seen, tending laterally into the mountain range. At the distance of another mile, we reach the Ladera de las Vacas, which is the third Passo de Peligro, constituting the ascent from the river bed to the table height: it is short, but its ascent at the beginning is very steep, and with proper caution is no way dangerous: the river sets with great force against its base, and here last year two or three loaded mules were lost in coming from Chile, arising entirely from the carelessness of the arrieros in not having previously examined the pack saddles; the steepness of the descent and the ruggedness of the road caused the loads to shift, and falling on the shelving side overpowered the mules and carried them down to the river. The rider however has little to fear; the road is more than sufficiently wide, and his mule too sure-footed to excite the least cause

of alarm. The table height for the next six miles is generally very broad and level, except at certain intervals, where it is narrowed by encroachments of the river, and rendered undulating and stony by the action of the rains: these places are called the Laderillas, and from which we perceive the river immediately below us: the opposite bank is likewise much nearer than we have hitherto witnessed it, and it is remarkable that its sides are perpendicular for a depth of 200 feet, although it appears formed wholly of fine alluvial detritus. We now arrive at the river Las Vacas, which in the height of the summer flood is somewhat dangerous to ford, but during the greater part of the year it is crossed without difficulty: in the end of December it is necessary to seek the fording place a mile up the stream, but this can only be effected by surmounting the height of an angular point in the mountain, and descending by a very steep and difficultly accessible path. This stream, which is one of the many auxiliary sources of the Mendoza river, owes its origin to a lengthened series of ravines, leading up to the central ridge of the Cordillera towards the northward: quitting the lateral mountain range, it has cut an almost perpendicular channel across the table height, and thus unites with the main stream. The usual place of fording is therefore not far above this point of junction. The descent to the river bed is sufficiently easy. Having crossed the river, we ascend the opposite bank to pass again along the table height. The formations hereabouts consist of sienitic and basaltic porphyries; we see in some places for-

mations of dark breccia, where small rounded pebbles of quartz are united by a black ferruginous argillaceous and siliceous cement easy of separation. We shortly arrive opposite the valley of Tupungato, which affords almost the only striking view on the eastern side of this part of the Cordillera: this valley opens from the opposite side of the river; it is much broader than that we have passed through, and much longer, its termination being closed by the celebrated peak of Tupungato, said to be the highest point of the Chileno Andes. From this place Tupungato appears as a lofty peak, rising in a conical form above the receding points, which branch from the main chain, and though situated in the central ridge, seems as if it were an insulated mountain. This peak is said by many to be higher than the celebrated Chimborazo in Quito, which is 21,500 feet above the level of the sea; but this cannot be true, as it does not attain the limit of perpetual congelation, which in this latitude is about the height of 15,000 feet. Although from June to December it is either wholly or partially covered with snow, I have seen it in the month of May wholly bare, when only a few days before there had been heavy falls of snow on the Cumbre, or central ridge. So early as the month of November, in 1819, congelation had in great measure disappeared from its surface, and that principally from about its summit. In January, 1825, owing to the unusual storms of the preceding winter, this mountain was still nearly covered with snow: I mention these facts to show that Tupungato cannot attain a higher level than that assigned to the

limit of perpetual congelation, though from the known height of the Combre, and its supposed elevation above the central ridge, I am disposed to conclude that its actual elevation cannot be very far short of 15,000 feet.

Upon the table height upon which the road continues to lead, we pass by some more of the same kind of stone enclosures seen at Tambillito—their construction is precisely similar.

We shortly after descend to the river bed to round a point projecting into it, called the Punta de las Vacas, and again ascend the table height. From the Punta de las Vacas three vallies diverge in different directions: that of Las Cuevas, into which we now enter, assumes a WNW course; that of Las Vacas, which we have just traversed, follows from Picheuta a SW course; while that of Tupungato runs due south: it is to be observed that the latter valley is likewise a similar elevated table height through which the river Tupungato has cut itself a deep channel. This river brings down more water than the Rio de las Cuevas, and the two streams, where united, form the river which flows to Mendoza. The valley of Las Cuevas, which we now enter, is much broader and straighter than the one we have passed; it has in like manner a similar table height: we still continue to pass along the northern side, for the river has all along a disposition to flow on its southern side. At the distance of about six miles beyond the Punta de las Vacas we observe, as we approach the river, the Casucha de las Vacas, situated on a small height on the opposite side of the river. There are several of these

casuchas on the road, and the description of one will suffice for the whole, since they are all alike in size and structure.

The casucha is a small building of burnt bricks, held together with lime mortar, a mode of structure somewhat remarkable in a country where the best houses are constructed of sun-dried bricks, cemented together by mud: it consists of one single room, whose floor is raised upon a solid foundation ten feet above the ground, the ascent to it being effected by steps of brick and mortar: the size of the room within is fourteen feet by twelve feet, and its height is twelve feet; the floor, the walls, and the roof are of the same materials, the latter being an arch covered over, so as to form on the exterior two inclined planes, like a ridged roof,—no great body of snow can lie upon it. Formerly every casucha was supplied with a wooden door, but immediately upon the first removal of the Spanish authority in Chile these useful edifices were neglected, the first blow being given by the small piquets of patriot soldiers stationed along this pass, who, rather than give themselves the trouble of foraging for brushwood, wantonly consumed not only the doors and the door-frames, but the lintels; the consequence is, that the brick-work, loosened in removing the wood-work, is going rapidly to decay. In lieu of windows, two or three narrow loop-holes were left in the walls. The interior of these places presents a very miserable appearance; independently of their decaying condition, they are blackened with smoke, bedaubed with filth, and dirty to an extreme: no traveller will ever put his foot into them, while better accommodations

are found in the open air; but in the depth of winter, in inclement weather, with the ground covered with snow, these places of shelter are of great utility. The casuchas were constructed by Don Ambrosio O'Higgins, when President of Chile. In his time these houses were stored with regular supplies of charqui, and other dry food, which, together with charcoal, were preserved in lockers and cases: the traveller, on obtaining a proper licence, was furnished with the key of these stores, which he used according to his necessities. Before the erection of these casuchas, many couriers and travellers fell sacrifices to the inclemency of the weather, in attempting the passage of the Cordillera; for the snow storms, or temporales, as they are called, set in so suddenly, and fall so thickly, that every object is hidden, and the traveller, even now, is sometimes lost in passing from one casucha to another, although in the higher parts of the mountains they are no more than three or four miles apart. These instances are very rare, as no one of common prudence would attempt to move so long as clouds are visible; and it is not unfrequent in mid winter for a traveller to be detained a week or a fortnight in one casucha, awaiting an interval of fine weather to proceed to the next. The snow, on its first falling, is always too soft to bear the weight of the traveller. I should here observe, during the winter the journey can only be performed on foot. The influence of the sun, however, in a day or two, melts a portion of the surface, which is absorbed, and being again frozen at night, soon hardens the snow, and it becomes converted into a solid mass resembling a glacier.

About a league onward, not far from the Estero de Santa Maria, I measured the height of the table flat; at about fifty feet above the bed of the river it was 7,928 feet above the level of the sea. The mountains which bound the valley are of considerable height; they decompose readily into fine earth, so that their sides become accessible, except in those rocky pinnacles which form their pointed summits. They appear to be composed of sienite porphyries, sometimes of a loose granular breccia, approaching perhaps to the state of clay porphyry, being in some instances very coarse, at others very fine, with a cement of dark ferruginous earth, enclosing small rounded angular quartz pebbles. The soil upon the surface of the valley is a fine red earth: upon the neighbouring hills are many herds of guanacos, which are hereabouts hunted principally for their skins; the most favorable spot is near the Porrales de Pavo, about seven miles beyond the Casucha de las Vachas, where, on the summit of the hill bounding the southern side of the valley there is a large natural enclosure, encircled by numerous lofty pinnacles of sienite porphyry, which are inaccessible even to guanacos, excepting at one spot, used as the entrance to the enclosure. A pack of dogs is brought for this purpose by huntsmen, who are mounted on horseback, and who, on descrying a herd of guanacos, endeavour to hem them in, and prevent their escape. On giving a particular yell, the dogs set off in pursuit, and the hunters move round on different points, so as to cut off their retreat: they generally endeavour to chace them into some corner, whence they cannot escape; such, for instance as the Porrales de

Pavo before-mentioned, where they are easily caught by the lasso: the flesh of the guanaco is sweet and well-tasted, but the skins only are sought after; the bodies are given to the dogs.

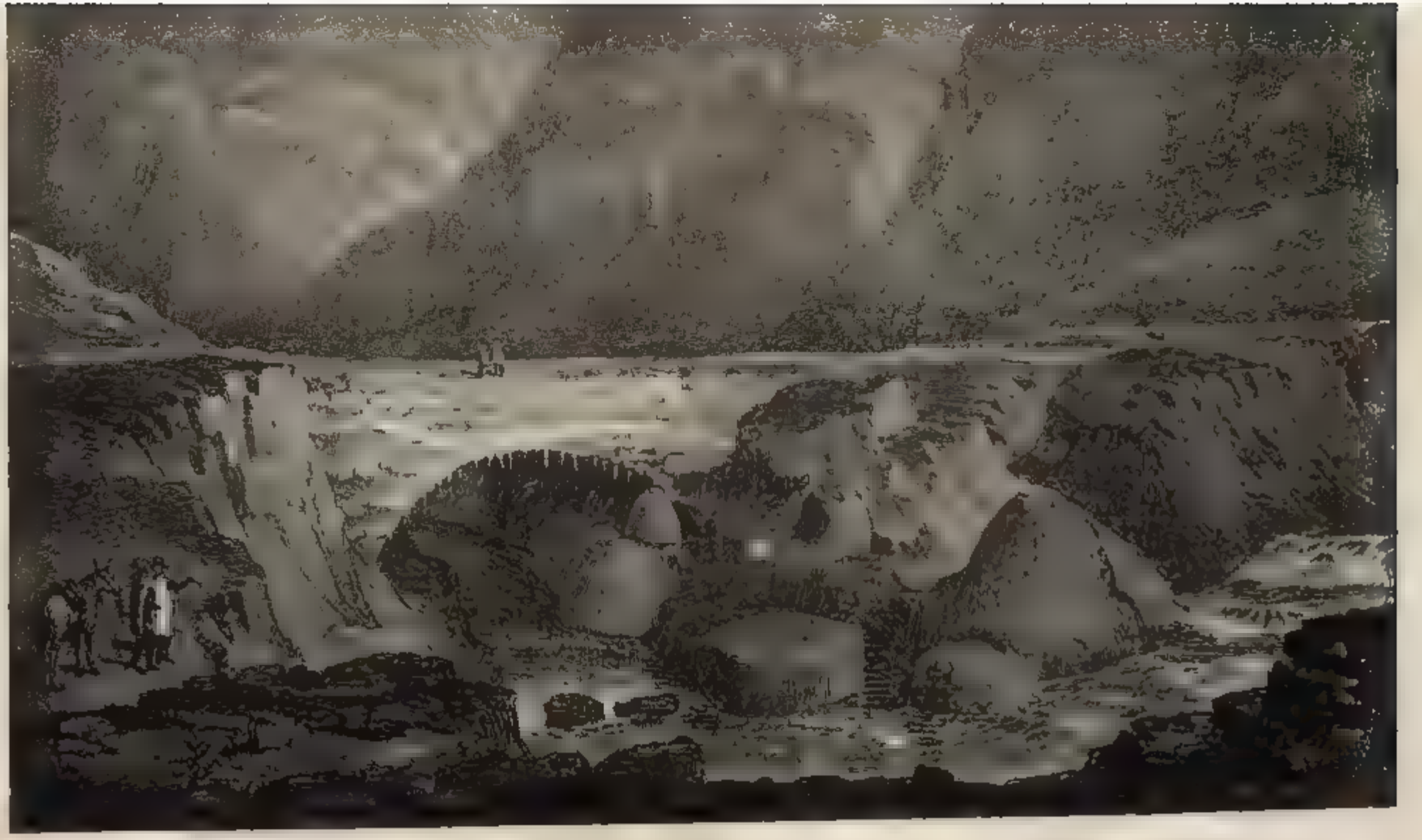
About a mile beyond the Porrales de Pavo, on the same side of the valley, is seen through a break in the mountain side a remarkable point in the elevation of the mountain range, appearing like a vast castle, somewhat of a square form, flanked at repeated intervals with numerous buttresses and towers, connected with regular embattlements: the walls of the fortification seem 400 feet perpendicular, having a front 1,000 feet in length, and is connected with a series of fortified lines and ramparts extending eastward 500 feet, where they are terminated by another square castle of smaller size, but no less apparently a regular work; other lines tend farther, till the perspective is hidden by the confined opening which displays the enchantment. This fairy-like castle is placed on an eminence of about 1,500 feet above the level of the valley. The rock is evidently marked by faint horizontal lines, of different shades of colors, indicating a stratified formation, but it has a tendency to split, and divide itself by long vertical fractures, giving it more the semblance of a basaltic formation; probably it may be a basaltic porphyry. I wished to have ascended the hill, to examine its structure more closely, but to my regret I was obliged to hurry forward on every occasion on passing the Cordillera, without having leisure to move out of the direct track of the mules. I may here claim for myself the indulgence of a few remarks. Never having either travelled in mountain-

Cerro de los Penitentes a remarkable castellated Formation in the Cordillera

ous countries, or had opportunities for gathering practical information relative to mountain formations otherwise than from books, I may be excused if the views which I have given of the structure of the Cordillera do not prove correct; an acquaintance with the science of geognosy can only be derived from actual observations of mountain formations. It would be unpardonable were I to mislead others by pretending to a full acquaintance on subjects of which I have no more than a general knowledge: my object in making these observations was partly to satisfy my curiosity, and in no small measure to divert my attention from those gloomy reflexions, which, while travelling alone, pressed upon my mind in pondering over the circumstance connected with my residence in South America: considering, however, that nothing is known in Europe relative to the geological structure of this part of the Cordillera, it struck me that I should be backward in duty were I to withhold these remarks, merely because an uncertainty may hang over my mind as to their being scientifically correct. I therefore present them as they are, with all their imperfections, trusting to a due share of indulgence, in the event of erring in my geological definitions.

This castellated rock is called El Cerro de los Penitentes. Proceeding onwards half a league, we pass by the second casucha, Los Puxios, and, at a farther distance of two miles, we reach the celebrated Inca's bridge, La Puente del Inca. I ought to have observed that for the last three or four leagues the bed of the valley is a calcareous and gypseous tufa, more or less mixed with earthy matter: this

kind of material forms the bed of the valley to nearly its whole length. It will be easy to conceive that hot mineral springs flowing through this kind of deposition would form large excavations: through such an excavation it has happened that the river Las Cuevas has forced its way, leaving a large natural arch over the stream, called the Inca's Bridge. The river previously takes an easterly course; then, turning suddenly to the southward, runs in this direction about fifty yards, when it passes under the bridge, which it has no sooner cleared than it resumes once more its course to the eastward. The river is here considerably contracted by the rocky concretions which form the abutments. The bridge consists of a single arch, of a tolerably regular elliptic curvature; its span is seventy-five feet, springing from the massive concretions before-mentioned, from which issue hot springs of mineral water. The height of the top of the bridge above the river is 150 feet, its breadth being ninety-five feet; the thickness of the arch at the crown is about twelve feet, the whole being stratified, for we see it formed of distinct layers, or beds of gypseous tuffa, varying in thickness from one to twelve inches, and exhibiting down to its base a section of the deposit that fills the bed of the valley. The under surface of the arch is beset with innumerable long botroydal concretions, from which the mineral springs are perpetually dripping, leaving white icicle-like crystals of saline matter, which are collected by the muleteers, and carried to Mendoza, for medicinal purposes. The hot springs are remarkable; one in particular rises out of a sharp conical rock of concrete matter,



Inca's Bridge & Hot Mineral Springs in the Cordillera

situated on the marginal bank at the angle of the river: it is about forty feet above the river, its pointed apex being terminated by a little bason, about two feet in diameter, and one foot in depth, out of the bottom of which the hot spring continually rises, and flows over the conical sides. Another spring rises out of a solid rock nearer to the foot of the bridge; three other springs issue from the same level out of the same rocky abutment, but beneath the spring of the arch. The water flows from imperceptible fissures, in the bottom of little pools, about four feet in diameter, the surplus water flowing over the brim, and dripping down the massive concretionary abutments, upon singularly formed rounded blocks of the substructure, which have, from this incessant action acquired a rounded form and a party-coloured hue: these curious masses of rock have become undermined by the summer inundations of the river, which, on its fall, appears as if they hung without support, their margins being beset with a row of icicular concretions formed by the dripping of the mineral water that flows over these masses, in a very thinly expanded sheet.

The waters of the several springs resemble each other; they are strongly saline and chalybeate, void of smell; and though seeming to issue in a boiling state, do not possess a higher temperature than 96°, the appearance of boiling being caused by the rapid disingagement of air from the bottom of the basin whence the water proceeds: the air thus extricated has no smell, has no effect on metals, and is, I imagine, simply carbonic acid gas. It had always been my intention to examine the saline icicular con-

cretions, the rocky structure, and the ochreous deposite, but I subsequently lost all my specimens. I much regretted this loss, as there were several points on which I was anxious to satisfy my curiosity; among these I may mention the following circumstances: a friend of mine, an intelligent surgeon, on his return to Chile from Mendoza, over the Cordillera, brought a number of rounded stones he had collected about the springs of the Inca's bridge, as well as at some distance from them; these, he supposed, were Bezoar stones, voided by the guanacos, that frequently come down from the mountains to drink the mineral water, which, he conjectured, must act upon them as an emetic. He therefore, drank some of the water, which produced those effects on him. The fact appears confirmed by the circumstance of these stones having been no where else discovered in the Cordillera, except at this place, and that it is known only to a few native arrieros, who have kept the secret to profit by the sale of the calculi which they carry to Mendoza and Aconcagua. These stones are sought after by many, who believe that, having been placed before the sacred altars, they become possessed of wonderful curative powers, in which respect they resemble the famed Bezoar stones of the East, which, even to the present day, are highly prized for their alexipharmic virtues. The calculi my friend brought with him varied in size from that of a cherry to a ball of two inches in diameter; externally they were somewhat globular, slightly flattened. or compressed in places, of an ochreous colour, having a smooth and very fine grained surface, and soft enough to be scratched with

a knife: internally they appeared composed of distinct laminar concretions, which are very difficult to separate. I sawed one through the middle; its section was similar to other Bezoar stones I remember to have seen; like them the concretions appear formed upon a blackish nucleus of extraneous matter, the first lamellæ are thin and scaly, the others increase in thickness as they attain a larger diameter; they are too of various colours, so that the section of the stone presents an onyx-like configuration, the concentric shades being of various intermediate tints, between white and ochreous brown: some of the layers are compact, and of a crystalline texture, while others are dull and porous. The calculi are composed apparently of carbonated lime, for they strongly effervesce in dilute common sulphuric acid, and I regret having no other acid at hand for a more minute examination. Their specific gravity is 2·47.

In order to ascertain the cause of the emetic property of these mineral springs, it occurred to me that I had in my house at Concon a sample of the water given to me two years and a-half before for examination, but which for want of leisure had not been done. I therefore now subjected it to the trial of a few reagents, from which I concluded that it contained an alcaline muriate (muriate of soda) mixed probably with a small * portion of muriate of

* The following were the effects on subjecting the water to these experiments:

Alcaline hydrosulphuret	no change.
Prussiate of potash	none.
Decoction of galls	none.

lime, and alcaline carbonate. No trace of metallic salt appeared to explain the cause of its emetic properties.

The geological formation between Los Paxios and the Inca's bridge is coarse pudding stones, and coarse breccia with fine black breccia; sometimes the breccia is of a granular structure of hornblend quartz.

Sulphuric acid	a few bubbles of air disengaged, scarcely perceptible.
Nitrate of barytes	no change.
Acetate of lead	white milkiness.
Nitrate of silver.....	copious white precipitate.
Oxalate of ammonia	very slightly turbid.
Ammonia	no change.
Soda	none.

No ochreous deposit was found in the sample, after standing so long a period, and what is still more remarkable is, that no trace of iron should appear, considering the sediment formed on its first issuing from the spring, and that the saline concretions formed upon the dripping roof of the arch, as well as the calcareous stalactites, become tinged of a yellowish brown colour, by exposure to air. It is no less singular to find no traces of sulphate when we consider that the whole bed of the valley, as well as the neighbouring mountains, contain such vast quantities of gypseous formations.

CHAPTER VII.

MENDOZA TO SANTIAGO.

Paramillo de las Cuevas.—The Cumbre, or highest Pass of the Andes.—Attenuation of the Atmosphere.—Other Passes.—Red and green Snow.—Valley of Calavera.—The Portillo.—Springs.—Salto del Soldado.—River Colorado and Bridge.—Bridge of Viscacha.—Valley of Aconcagua.—Town of Santa Rosa.—Lasso Bridge.—Chacabuco.—Santiago.—Hints to Travellers.—Itinerary, Mendoza to Santiago.—Barometrical Tables.—Other Passes over the Cordillera.—Pass of Dehusa.—Of Los Patos.—Of the Portillo.—Of Planchon.—Of Antuco.—Winter Travelling.

NOT far from the Inca's bridge are stone pens, similar to those at the Tambillitos and heights of the Punta de las Vacas. Half a mile onwards we pass the Rio de los Horcones, which, like the river of Las Vacas, constitutes, in the summer season, a powerful auxiliary branch of the Mendozino stream: it rises from an opening in the mountain chain on the northern side of the valley, and takes its name from its being forked near its exit by the union of two main branches, the many sources of which are derived from the melting of snow in the higher ridges of the Cordillera. In the month of December or beginning of January, this stream is difficult to cross, not so much from the depth as from the rapidity of the current, which, owing to blocks of stone that impede its course, is thrown into eddies and deep holes: the danger to be apprehended is, that the mule, by treading on a rounded stone,

may slip over it, and be plunged suddenly into the eddy: there is no fear for the animal; which, though for an instant it may be borne away by the current, will quickly recover itself. The mule is an excellent swimmer; all that is requisite in such case is, that the rider should preserve his seat and maintain his presence of mind. The natives, who are good horsemen, never entertain the least apprehension; but it happened that an Englishman, who was a bad horseman, recently arrived from Europe, and who passed a few days before me, lost his presence of mind, and fell successively into the rivers of Picheuta and Horcones, from each of which he was extricated by the lasso: the peons, on such occasions, always have their lassos prepared. At all other times of the year, these rivers may be crossed without the least apprehension.

Advancing somewhat more to the westward, on re-ascending the table height, we have a fine view in the opening of the valley of the Horcones, when we see some very extensive and somewhat remarkable gypseous formations, curiously stratified. From the Rio de los Horcones to Las Liñas, two miles onwards, the whole bed of the valley is filled with a gypseous deposite, so pure that quarries were formerly worked here for the supply of Mendoza, where a considerable quantity of gypsum is annually consumed in the manufacture of wines and spirits. The mountain ranges on both sides of the valley present extensive formations of fine-grained gypsum, sometimes pure, sometimes mixed with carbonate of lime, generally more or less of a yellow brown or reddish hue,

in extensive strata of very considerable inclination, sometimes interrupted by formations of breccia, both fine and coarse, the former resembling a dark brown sandstone, intermixed with strata of gypsum and of limestone, which must in some cases be quite pure, for we find in the surface of the valley pure white carbonate of lime, which splits easily into rhomboidal fragments, wanting only a little more transparency to resemble Iceland spar. The greater part of the gypsum hitherto met with is opaque, granular, colored, veined, or spotted with various grains of darker hue; but as we now advance we find on the table flat masses of fine pellucid gypsum, easily separable into curving lamellar plates, which probably exists in regular stratified beds between the layers of fine breccia.

At the distance of twelve miles from the Rio de los Horcones, we arrive at the third casucha, del Paramillo, at the foot of which mountain it is situated. The Paramillo de las Cuevas is a barrier stretched across the valley, formerly connecting the two opposite ridges, but its southern side has been cut through by the river, and a cleft formed, the sides of which are of considerable depth, and perpendicular; our progress is therefore necessarily directed across the height of the barrier. The Paramillo consists of a very coarse greenstone porphyry, or rather an amygdaloid; sometimes it approaches the structure of a close pudding stone, at others an amygdaloid, consisting of rounded portions of greenstone porphyry, cemented by matter of similar nature; in some cases the mass is completely vesicular,

the rounded portions having disappeared. The road leads in a zigzag direction up its side, till, on reaching the summit, it winds round the heads of several broad and shallow declivities, which slope down towards the edge of the precipice, overhanging the steep chasm through which the river flows. One of these is somewhat remarkable, as it forms a long oval dyke, or bason, of considerable depth, having round it, excepting at its southern end, a somewhat steep parapet or ridge, along the sloping edge of which the path leads: on one side of this path stands a large wooden cross, to commemorate the loss of a courier, who fell a sacrifice to a heavy temporal which overtook him in the depth of winter, while crossing over this Paramillo. I have been thus particular in describing the nature of this barrier, since it has been asserted by a late traveller that there exists here the crater of a volcano. I visited all the eminences in the bed of the valley in search of the described crater, the nearest resemblance to which is the long oval dyke before-mentioned, but about no part of the valley could I discover any traces of volcanic formation: in some places the blackish greenstone porphyry presents a hue similar to stone which has been exposed to a strong fire; but this is no other than the same weather-beaten appearance which the whole of the neighbouring extensive greenstone porphyry rocks assume: the appearance of these stones might induce an uninformed person to suppose that they had been exposed to semi-fusion, which could only have been produced by a neighbouring volcano, an error into which he might be led

by the accounts of the natives, who believe that the whole Cordillera owes its origin to the action of subterranean fires.

We descend on the western side of the Paramillo, and travel some distance along a plain, and cross the Rio de las Cuevas, which is one of the principal sources of the Mendozine river, here a mere rivulet. At a short distance we come to a part of the valley covered with immense blocks of stone precipitated from the impending rocks: these seem of a formation very similar to that of the Paramillo, only that the rounded masses are of larger size and of a coarser grain; the hollow spaces more frequent, approaching, in some instances, to a honeycomb structure, and in other cases very large, whence the name Las Cuevas: these blocks of stone bear the same dark bronzy weather-beaten appearance as the rocks of the Paramillo. This kind of rock constitutes the mass of the mountains which form the valley: it is difficult to say whether the rock be stratified or not: in the mass it certainly is in beds of very considerable thicknesses; but these again seem to have a disposition to decompose or splinter in three different directions, corresponding to three axes of polarity, not very unlike those corresponding to the primitive form of felspar; the surface of the rock decomposes into a fine red earth, but some parts appear to resist longer than others the crumbling operation of time. Here are ledges or shelves of rocks protruding from the earthy surface, either nearly vertical or inclined in the direction I have mentioned. A similar formation exists upon the summit of the pass of the Cum-

bre; an instance of it is also to be seen in a little eminence in the centre of the valley between the Paramillo and the Cuevas, where an inclined ledge of the rock projects, and this has also been supposed by a late traveller to denote that it must have been the effect of volcanic operations. At this place is the fourth casucha of Las Cuevas, distant from that of the Paramillo four miles. The height of the Cuevas is 10,044 feet above the level of the sea. We can now easily distinguish the winding ascent up the face of the Cumbre, upon the southernmost line of hills that hem in the valley which here becomes much narrower; the foot of the ascent is a mile in advance to the westward. Beyond this the upper part of the valley turns to the north-west, and at no very great distance disappears among the numerous small ravines or undulating ramifications running from the loftier parts of the chain lying to the southward of the Volcan de Aconcagua. The ascent of the Cumbre is gradual, but long and tedious: this mountain is covered with loose reddish earth, mixed with angular fragments of stone to its very summit. The road leads right and left in a zigzag direction, so as to moderate the ascent, and enable a traveller to reach the summit on the back of his mule: all the accounts of dangerous ascent and of precipices which almost every traveller has given of this part of the journey are untrue, there being neither precipice nor danger. The road up the Cumbre is however laborious and tedious, owing to its almost endless turnings, which make the road travelled over above ten times as long as a straight line drawn down the inclined side of the mountain. After exerting a due share

of patience, the traveller finds himself at length on the summit of the Cumbre, a part of the high main central ridge of the Cordillera, and the loftiest point of the road between Chile and Mendoza, which here attains an elevation of 1,876 feet above the Cuevas, or 11,920 feet above the level of the sea. On reaching the summit, I was greatly disappointed in failing to meet with the scenery which the account of others had led me to imagine, and which my fancy had pictured; instead of an expansive view of receding mountain tops, lost, on the one hand, in an infinite succession of distant hill and valley, and, on the other, towering their snow-clad summits to the heavens, the view is confined by the bare rocks of the adjacent ridges: it is indeed no small disappointment to find ourselves hemmed in a deep basin of rugged mountains, which, though possessing little more comparative elevation, yet from their proximity entirely intercept the view in all directions.

When I first crossed the Cordillera, in the end of May, every body told me in Mendoza that I should meet with great difficulties in climbing the Cumbre, it being known that a heavy fall of snow had occurred during my unfortunate detention in Villa Vicencio. These obstacles were depicted in such fearful colors, that I had made up my mind to accomplish the journey on foot, under the belief that the road of the Cumbre would be impassable for mules. My surprise may be conceived in finding no where a single particle of snow; that which had fallen a fortnight previously had entirely disappeared from the heat of the ground, over which a cloud had scarcely hovered for many months, and under the

immediate influence of a still scorching sun. On my return over the Cordillera, towards the end of October, 1819, I was surprised at the small quantity of snow visible on the summits: that which obstructed the passes was confined to the hollow gullies, but little exposed to the direct influence of the solar rays, and more sheltered from the bleak drying winds which daily blow through these mountain passes. On my return to Chile, in the first days of November, I was still more surprised at the rapidity with which the snow had disappeared; it was now in a state passable for large troops of mules. From the end of May to the end of October the Cumbre and great part of the vallies leading to it on each side can only be passed on foot; and although, in most years, this may be held as a general rule, it ought not always to be depended on, for in other seasons it happens that the Cordillera closes a month or two earlier, and opens as much later: thus it happened last year, the Cordillera being impassable on horseback in April 1824; and on accomplishing my last passage over it in the middle of the following January, I found as much snow yet remaining as was observed in the end of October, 1819; but more snow fell in the past severe season than had been known for many years before. This greater accumulation of course occupied a longer time in thawing than under usual circumstances; to this cause also is attributable the before-mentioned difficulties attending the fording of the rivers: such this year was the inundation of the river Concon, in Chile, on the margin of which I had resided several years, that it was unfordable from the middle of November to the end of March, although I

had never before known it to be impassable for more than a month at the height of the summer solstice.

It is usual for the arrieros to cross the Cumbre either early in the morning, or towards the evening, in order to avoid the bleak drying winds which between the hours of ten and four in the day blow across the main ridge with furious violence, so as render the passage very unpleasant.

Whoever attempts this journey will be frightened with accounts of the difficulties he will have to suffer from the puna, the name given to that sensation of short and difficult breathing which always affects us on ascending into rarefied atmospheres. It is the apprehension and talk of every person who has crossed the Cordillera, who will tell you that he has escaped the so-much dreaded effects only by eating plentifully of onions, and never tasting spirits on the journey, although wine is considered an antidote to the puna. These precautions are, however, unnecessary, as but few persons who accomplish the ascent on horseback have ever felt it, excepting those who have had diseased lungs; but many persons who have ascended the Cumbre on foot, by over-exerting themselves to keep pace with the mules, have experienced this sensation. I doubt that the puna is violently felt unless brought on by great bodily exertion. I have walked both up and down the Cumbre without being affected. Neither did my wife, nor my child, when an infant scarcely six months old, with the thermometer standing at thirty-five, and the barometer nineteen inches and one-eighth, experience the least difficulty in breathing, though we

might be certain that in an infant of that age, with lungs so tender, we should first observe the change in the respiratory functions, were it alone originating from too rarefied an atmosphere. I mention these facts to show that the traveller ought, in no instance, to place too much reliance upon the exaggerated accounts of the difficulties of the journey, which he will hear reiterated from all quarters. The northern side of the ascent is, as has already been mentioned, covered with a loose red soil, but in many parts of the mountain side are shelves of rocks, inclined or vertical: a remarkable instance of this is seen in the very summit, where a long wall of rock stands up several feet above the soil, irregularly broken and beset with pinnacles, giving it somewhat the appearance of a ruined chapel, whence the name of this pass of La Iglesia: there is also another pass up an adjoining branch of the ridge, called Mejico, from a plant growing there, a variety of mutisia. The rock of the Iglesia approaches more to the regular amygdaloid, while, in other parts of the Cumbre, the porphyritic greenstone assumes the appearance of the smooth and even texture of the green color of the porphyry of the ancients.

The descent of the southern side of the Cumbre is more broken into gullies, less earthy, and more stony: owing to its situation, the sun's rays are so much inclined upon the surface of the snow collected here, that the whole face of this side remains covered when the northern side is completely bare. I have noticed, on the several occasions that I have crossed the Cumbre, considerable patches of red snow; I have also noticed, though in rare cases, green snow,

both in the frigid regions: this I imagine is the first example of coloured snows being found in latitudes so low as thirty-three degrees. About half a mile from the summit we pass by the Casucha del Cumbre, built on a small flat: the descent is very tedious, and in many places very steep; like the other side, the road is zigzag, but less regularly so; some of the angular turnings are very abrupt and sharp, so that a fearful rider will experience apprehension, but no real danger exists: the best way is to give the mule his head, and he will in no case fail to step firmly and surely, and carry his rider safely. The general course of the ascent up the Cumbre on the northern side is south, while that down the opposite side is WSW.

On nearly reaching the bottom the course is south for a short distance, when we find ourselves at the entrance of a valley of about 200 yards wide, presenting a level plain, hemmed in by very steep hills; in this plain we see the origin of the Aconcagua river, which here springs from the different gullies and ravines above the Cumbre. We pass along the course of this brook, and arrive at the Casucha de la Calavera, about a mile from the entrance of the valley, and four miles from the Casucha del Cumbre. Its height by barometrical computation is 9,450 feet above the level of the sea, and 2,470 feet below the summit of the Cumbre. The rocks which skirt this valley are of greenstone porphyries, distinctly stratified; the sides are lofty, nearly perpendicular, bare, and craggy towards their summit. The road continues for about four miles, when the valley spreads into a larger plain, on the right of which is a steep

recess, and in the midst of it is a lake of considerable size. At a little distance onward we arrive on the brink of a rocky barrier, having below it a very steep descent, which appears to intercept our progress, but here is an outlet between two huge masses of rock, having just room enough to admit a loaded mule to pass. It is hence called the Portillo, a name which must not be confounded with another pass in the Cordillera, to the southward called Il Paso del Portillo. The Laguna del Inca, the Inca's Lake, seen on the right hand, appears to be about four miles distant, and seems placed in a dyke of an oval form, said to be a league in length, and surrounded in three-fourths of its circumference by lofty precipitous declivities, which tower above it to a great height. There are many wonderful tales related of this lake, one of which is that it is unfathomable. The road down the Portillo is laborious; it is a mere track marked by the footsteps of the mules, winding down the surface of the steep declivity, which is covered with sharp loose fragments of rock. Arriving at the bottom, we continue to descend along a ravine, on one side of which is a small raised flat, on this is built the Casucha del Juncalillo, its distance from the summit of the Portillo being a mile and a half, or five miles and a half from the Calavera. The height of the Casucha del Juncalillo above the sea, according to my barometrical observations, is 7,730 feet. The descent hitherto has been very rapid, since, from the summit of the Cumbre, along a winding track, ten miles in length, we have descended 4,190 feet. The rocks constituting this lofty circumvallating hollow now quickly

verge into syenite porphyries, still, however, partaking greatly of the character of greenstone porphyries.

We now quickly descend into an apparently very deep basin, and our progress appears to be stopped by an immense barrier, a hill of very great elevation, the Cerro Juncal, which rises perhaps 4,000 feet above the base of the river. As we approach it, we perceive two vallies of considerable extent, opening, one to the left, the other to the right of the Juncal. The former gives rise to a principal tributary arm of the Aconcagua river; it descends from the numerous ravines, falling into this long valley, which ramify from all points of the great chain of mountains, branching from the north-west of Tupungato. The Rio del Juncal here effects a junction with the other branch from the Cumbre, which, receiving in its way numerous rivulets, is increased to a more considerable size than when we left it in the valley of the Calavera. Our course from the Portillo is nearly SW. On our advance towards the Juncal, we observe, amidst the craggy precipices of this lofty mountain, the first indication of approaching verdure, which is the more agreeable, after having travelled so many days through ravines where the eye has become wearied with the monotonous aspect of slopes entirely barren, and of crags devoid of the least vegetation; but as we advance into this valley our delight is increased on perceiving that we are entering a new world: at every step the climate becomes milder and more genial, the winds are moderated, the eye delighted with verdure; for we see rich shrubs springing up not only on the banks of

the river, but on the mountain sides, to their very summits. The pleasure of the scene is heightened by the numberless birds, whose notes are echoed from side to side: all nature, indeed, seems revivified, and the rapidity with which the transition is effected is both enchanting and wonderful. We follow the course of the river till we reach the eighth casucha, the Ojos de Agua, where are two buildings close to each other, one of which has almost fallen to decay. On the right hand is a large amphitheatre of hills, situated at the mouth of a ravine, on one side of which arise, in very clear pools, a number of springs, from the foot of a very deep declivity of loose stones piled against the mountain side to a considerable height: these springs seems to flow from beneath the base of the mountain, filtering through the bottom of the stony declivity; they are perpetual, and, from the topography of the spot, I conclude that they derive their source from the filtration, through crevices in the mountain, from the bottom of the Inca's lake. The lake is constantly supplied from the numerous small cataracts and streams derived from the melting snow upon the encircling mountains; and as there is no apparent outlet for the water, little doubt can exist but that it makes its escape through the springs of the Ojos de Agua.

We now ford the Rio de los Ojos de Agua, which ordinarily is an insignificant streamlet, but, owing to the unusual accumulation of snows this year, swelled unprecedently. I arrived here about an hour before sun-set, intending to proceed a few leagues further before concluding the day's journey, but the stream was too much swelled for us to venture across with

our tired mules, and I consequently waited here till the following morning when the depth of the river had lowered a foot and a half. It will be found generally advisable, whenever we can so apportion our day's journey, to ford the rivers early in the morning, for the influence of the sun upon the snow during the day time causes a very considerably increased descent of water in the evening. The flow is checked by the cooler night, and decreases considerably towards the morning. The distance of the Ojos de Agua from the Juncalillo is three leagues and a half.

The road hence to the Guardia, which is about four leagues and a half more in advance, is a varied continuation of beautiful and picturesque scenery. The river has a gradual but rapid fall all the way; its course is interrupted by large rocky masses which have fallen from the cliffs above, and have become rounded by the continued attrition of the running stream: the noise of the torrent dashing over these falls, the eddies, and foam of the water, add greatly to the enlivening scene. In many places are trees of considerable size, of mayten, quillay, and puemo, whose rich foliage, interspersed with beautiful shrubs, cover the valley down to the edge of the river; the hills, to their very summits, partake of the general verdure, and even the crags are covered with lofty clusters of the cactus peruvianus, whose branching stems rise perpendicularly to the height of thirty feet, and are beset with numerous horny spines, long enough to be used among the natives for needles. This cactus is here covered with a beautiful parasite; the loranthus aphyllus, which I have so called because

it is without peduncle, pedical, or leaves; its rich crimson flowers are closely set upon the lofty cactus, so as to cover large patches of its stem, the green of which, contrasted with the splendid crimson of the parasite, is very beautiful. We likewise see upon the mountain brows the magnificent pourretia cærulea, a plant somewhat resembling the American agave in general appearance; it is peculiar, I believe, to Chile; its flower stem rises from a divergent thicket of prickly leaves, to the height of fifteen feet, and is terminated by a thyrse-like cone of divergent spikes, which are closely beset with large beautiful blue flowers, about which numerous humming birds are seen fluttering from flower to flower, sucking the nectariferous juices there secreted. Here is also the pourretia coarctata, furnished with a large cone of rich yellow flowers, upon a stalk which often rises to the height of twenty feet; this plant, however, is more common nearer the coast, the blue variety being that which is most ordinary in the hilly ranges.

I may add, generally, that the trees and shubs are all evergreens, infinite in variety, rich in foliage, beautiful in flower, and mostly peculiar to Chile; while the herbaceous plants and flowers are rich, various, beautiful, and novel; to a botanist, no treat can be greater than a journey through the Cordillera, in the months of December, January, and February. I found here, not only most of the plants seen in the lower parts of Chile, but many other varieties, quite novel, and peculiar to these elevated situations. I regretted that I was not at liberty to pursue the journey at my full leisure. This valley is consider-

ably narrower than those on the other side of the Cordillera: we have not the same broad elevated table flats, but our course is always near the river, and the road incessantly undulating: on our approach to the Guardia, the ravine is shut in on both sides by rocks of syenite porphyries, whose surface decomposes into a rich earth; but we see some craggy places nearly perpendicular to a vast height, down which little streamlets of water dash in beautiful cascades: they are frequent, but occurring only in the height of summer from the melting snow, and though, on a diminutive scale, yet frequently presenting themselves, they serve to increase the general interest. Perhaps the effect is in no small degree heightened by our having so enchantingly emerged from the bleak sterile vallies in which we have been ingulphed on every side throughout so long a journey. In the midst of this scenery we arrive at the Guardia del Risguardo, where, from the beginning of December to the end of May, is stationed an old major and three soldiers, whose duty it is to examine and sign all passports, and to overhaul the luggage of travellers: this is done to prevent the passage of goods without paying the requisite duty; here also a toll is levied of two reals on every loaded mule. There was here formerly a building of larger dimensions than the casuchas; it was of sun-burnt bricks, roofed with tiles, and surrounded by a corridor. When I passed, six years before, the place was then falling to decay for want of care, but the great earthquake of 1822 razed it to the ground; since which it has never been repaired, but the guard remains under a miserable

shelter of bushes to keep off the scorching heat of the sun: a wall, built of stones, is thrown across the valley so as to intercept the passage, excepting at a door, by the side of which the guard is stationed.

The height of the guardia above the level of the sea, according to barometrical observations, is 5148 feet. Leaving the guardia half a mile, we cross the rivulet of that name, and at the farther distance of seven miles and a half, we ford the rivulet of Las Quillays: advancing still three miles, we arrive at the Punta de las Quillays, where the valley is intercepted by the Cerro de las Gualtatas. From the Juncal to this place, the valley, though somewhat tortuous, inclines to the SW; when it reaches Las Gualtatas it takes a sudden turn to the NNW, in which direction it now pursues its course. At the turn of the angle on the opposite side of the river is a large opening in the lofty range, down the numerous ravines of which many springs issue from several ramifications, and constitute the river of De las Gualtatas, a streamlet which owes its source more to the springs than to the melting of the snows: the water is very clear, while that of the river is turbid and red, as usually happens from the quantity of suspended earthy matter which the melting snow brings down with it. On turning the angle we ascend a steep path, called La Ladera de las Quillays, till we reach a tolerably elevated height formed by a barrier stretching across the valley, through the middle of which a very narrow and perpendicular fissure has been cut by the river, to the depth of four or five hundred feet.

The summit level is called the Alto del Puente,

and the cleft itself is called El Salto del Soldado, the Soldier's Leap, from a tradition, that a deserter being followed, jumped over the rent, and thus saved himself from his pursuers. The name of the Alto del Puente, or the Height of the Bridge, implies that there formerly existed a bridge over the cleft; certaintly it is a spot admirably calculated for such a structure. We soon after descend from the height of the barrier to a more moderate elevation, at a spot two miles distant from the Punta de las Quillays, from which we have an admirable view of the Salto del Soldado, and the road of the Alto del Puenta, together with the river flowing through the bottom of the cleft. The prospect is closed by the more distant mountains forming the ravine of Las Gualtatas, which are distinctly stratified, apparently composed of syenitic porphyries. We again descend to the river bed, and at the distance of three miles pass a rivulet, beyond which we reach the Ladera de los Papeles: from the angular turn of the valley the mountain formations gradually verge to the state of felspar porphyries, which have a remarkable tendency to split into fragments. We again descend to the bed of the river, and then mount the Ladera de los Loros; here the porphyry contains so great a superabundance of felspar, that the surface decomposes into a fine white earth: the decomposition of the felspar seems to have penetrated a long way below the surface of the rock, and has in consequence become sufficiently soft to allow the parrots to make their nests in the mountain sides, which are not mere holes, but little tortuous galleries, many feet in length. The valley becomes more pleasing as we

advance, and we continue to pass through much beautiful underwood, intwined with many pretty creepers, which cover the bed of the valley till we reach the river Colorado. This river brings down a considerable body of water from the many ramifications of the mountainous ranges lying to the southward of the Volcan de Aconcagua, a peak which, like Tupungato, rears its head on the main central chain of the Andes, about as far to the northward of the Cumbre as the latter is to the southward. This stream is more rapid, and deeper than the river we have passed. The two rivers are united here, and form in summer time, a river of considerable size, which flows through the valley of Aconcagua; whence, after running in a very tortuous course through a series of broad valleys, whose rich plains it serves to irrigate, it passes through the province of Quillota, and finally discharges itself into the sea at Concon, a few leagues to the northward of the harbour of Valparaiso. Excepting in the middle of summer, the river Colorado may be forded without difficulty, but at the period of inundation it is dangerous to cross it; at these times therefore, the course lies to the right up the ravine of the Colorado to a bridge constructed at a part of the valley where the river bed is greatly narrowed, and the banks of the stream confined by two opposite points of rock about twenty-five feet assunder, over which a few trunks of trees are thrown to form a platform four feet wide. In crossing this bridge it is usual to dismount, not that there is any danger, but a stranger feels some apprehension, as the bridge has no side-rails, and as the torrent dashes through the

contracted channel beneath him, with a furious noise, at a depth of about thirty feet. The Rio Colorado is five miles from the Ladera de los Loros. Our course now follows the bed of the river for six miles, when we reach a verdant spot, well cultivated, being irrigated by a small brook which springs from the impending mountain. This place called the Primera Quebrada, is remarkable for presenting us with the first rancho, a kind of hut, used throughout Chile by the peasantry for their residences: however miserable its structure, the sight of a human habitation is most grateful to the traveller, who, during many days of a toilsome journey has slept in the open air upon stones, in barren desolate spots, without having seen any buildings but the uninhabited casuchas, and who has probably seen no human being except those stationed at the guard-houses, at the extremities of the mountain passes. The altitude of the Primera Quebrada above the sea from my barometrical observations is 3215 feet.

Proceeding down the bed of the valley, the hills diminish in height; in the opening appears a plain of considerable extent. We pass by numerous patches of cultivated ground, and perceive the huts increasing in number, cheering us with the evidence that we are fast approaching the social abode of man. The hills now become covered with mimosa and algarroba trees. The distant plains of El Valle keep opening on our view at every step; and at no great distance before the opening of the valley we pass by a bridge called the Puenta de la Viscucha, rudely constructed of trunks of trees thrown over a very confined rocky channel, through which the river

flows. It is broader than the bridge of the Colorado, and defended by a hand rail. At length we enter the extensive plain called the Valley of Aconcagua, which is divided into small square sections enclosed by walls of rammed earth, and well irrigated by numerous gutters of running water, supplied from larger channels, which, at intervals, communicate with the river. On entering the valley, we lose sight of the river, and travel along the lanes which separate the cultivated enclosures, passing at times the margin of little hilly eminences, until the town of Santa Rosa appears in sight. We now again come to the river, which, at this place, is not fordable in the summer season; over it is thrown a puente de cimbria, one of the Indian hanging bridges, made of thongs of raw hide. The distance between the hills through which the river passes is about 150 yards, but the breadth of the stream, which here forms but one branch, is not more than fifty yards. The other space being filled with a level flat of loose shingle. Upon the hilly bank on one side, and upon the margin of the stony flat on the other are fixed several upright tall posts, with forked summits, which serve as the points of suspension to the bridge; the platform is made of two ropes stretched across the river, in a parallel direction, six feet distant from each other, passing over the forks of the longer posts, thence to shorter posts, and finally secured by winding them round stakes fixed in the ground: the ropes consist merely of two or four strands, or thongs of dried bullock's hide, loosely twisted like a rope. Between the twistings of these ropes the ends of canes are inserted as closely as they can be

Puente de Cimbrea or Indian Lofso Hanging Bridge at Santa Rosa de Aconcagua in Chile

placed, and a platform is thus made. This bridge is seventy-five yards long, and two yards wide; the canes which form the platform are of a solid kind, peculiar to Chile, called colini: they are about one inch and a quarter in diameter, and will support a great weight without bending. Over each of the ropes, and about five feet above them, are suspended upon the forks of the higher posts two similar hide ropes, the upper one on each side being connected with the lower at the intervals of every four feet by vertical hide thongs: the platform is therefore in the shape of an inverted curve—a true catenarian, supported upon the same principle as the iron suspension bridges lately introduced into England. Upon the northern, or lowest end, that is, upon the shingle bank, the platform is farther extended in an inclined plane, to make the ascent easy; and beyond this is constructed out of rude algarroba trunks a kind of windlass, turned by hand-spikes, round which the suspension ropes are twisted; so that by winding round the ropes with the windlass, they give to the whole structure the necessary degree of tension. The sensation experienced in crossing this bridge is not very pleasant, since from its lightness and its elasticity, it oscillates and vibrates at every step. It is, however, very secure, as it never bears more than the weight of a loaded mule at one time and the peon who leads it: a passenger on foot need have no apprehension of danger.

These bridges, from their lightness, are unable to withstand the effects of violent wind, which frequently upsets them; in such cases communication is cut off for a week or two till the proprietors send

the necessary hands to re-establish the fragile structure.

The privilege of constructing this bridge is annually rented by the government to an individual who levies half a real upon every loaded or saddled beast, and a quarter real upon every other animal. The traveller may choose which way he pleases, either by following the northern bank, and crossing the river by the above-mentioned bridge, or by passing over the wooden bridge of the Viscacha, already described as being on our left-hand, three leagues before reaching this place: in the latter case he will pursue a more circuitous route to Santa Rosa, generally called La Villa Nueva, the new city, in contradistinction to the San Felipe—La Villa Viega, the old city of Aconcagua, which is situated towards the centre of the valley, five leagues to the northward.

The "valley" of Aconcagua is a long flat basin, surrounded on all sides by lofty hills, formed of sienitic porphyries; the average height of the valley is about 2500 feet above the level of the sea, its length is about twenty-five miles, and its average width about eight miles. From the south-east and north-east angles of this plain two deep ravines open into the valley, forming the courses of the rivers Aconcagua and Putaendo, both deriving their sources from the central ridges of the Cordillera: the former is the valley through which we have travelled from Mendoza; the other is the valley leading to the pass of Los Patos, which is the road over the Cordillera, usually followed from Aconcagua to San Juan. Through these two great

ravines is brought into the valley of Aconcagua all the water produced by the melting snow on the western side of the main central chain of the Andes, and its more immediate lateral ramifications between the two lofty peaks of Aconcagua and Tupungato. The stream which flows through the more northern valley, and from the more immediate vicinity of the Volcan de Aconcagua, is called the river Putaendo; the other river which flows from the vicinity of Tupungato, and that part of the Cordillera, described in our journey, is called the river Aconcagua: this latter after entering the valley flows past the town of Villa Nueva, and then assuming a more northerly course, passes by the village of Curimon, until it arrives opposite the town of San Felipe. Here the valley of Aconcagua is nearly separated from the valley of Putaendo by a mountainous barrier, which stretches between them, and whose terminating point ends opposite another large valley, which opens towards the west: at this point the two rivers of Aconcagua and Putaendo form a junction, the united stream flows down this beautiful valley, and presents in its course towards the sea numerous angular turnings. The valley is for the most part cultivated, and the river in its passage bears the names of the different estates and places through which it passes, viz. Catemu, Llaillay, Ocoa, Quillota, and Concon.

One of the principal mountain ramifications branching from Tupungato Peak, and which divides the rivers Aconcagua and Maypo, tends in a very tortuous course towards the sea, presenting in the vallies, which skirt its base, and between the hollows

of its smaller ramifications many small cultivatable plains. The extensive valley of Aconcagua is separated from another more extensive plain, on which the metropolitan city of Chile is situated by the last mentioned great mountainous chain, and the road between these two vallies necessarily leads over the ridge of this chain: this is effected at a somewhat depressed part of the ridge, which here bears the name of La Cuesta de Chacabuco. A few leagues to the westward of the Cuesta of Chacabuco the ridge branches into three separate forks, all of considerable elevation, the northern one, forming with its arms the southern boundary of the remaining part of the river of Aconcagua, finally reaches the sea near Valparaiso. In a collateral branch of this ramification is a lofty mountain called "La Campana," the bell of Quillota. The middle ridge takes a south westerly course, directing itself to the sea, at the mouth of the river Maypo, on its northern bank: the third ridge assumes a southerly course, skirting the western edge of the valley of Santiago, and terminating at the river Maypo, near San Francisco del Monte, about fifteen leagues from the capital. The road from Santiago to the sea-port consequently passes over all these several ridges; that over the third being called La Cuesta de Prado, that over the second, the Cuesta de Zapata, and that over the first, the Cuesta de Valparaiso.

Pursuing our route from Villa Nueva, towards the capital, the road leads for above a league between cultivated enclosures, till we cross a rivulet, flowing from the neighbouring mountain range; we

then proceed on an inclined plain, covered with thorny trees and bushes, and enter a ravine, which at the beginning is broad, but which gradually becomes narrower as we advance; the ascent now becomes much more perceptible. Here are many beautiful creepers; among them, the eccremocarpus scaber, and a delicate variety of tropæolum of quite a novel character, with petals of azure blue, variegated with white; its root like three other unique varieties of tropæolum is tuberous. Upon this ascent we pass by a few cottages kept by persons who have flocks of sheep and goats, which roam upon the adjoining hills. Having travelled up this inclined plane, we reach the foot of the Cuesta. The ascent now becomes very steep; the road is cut out of the side of the hill, winding to the right and left, in a ziz-zag direction, and at times along the margin of the ledge of the impending steep barrier, but the road is perfectly secure, as the path is no where less than twelve feet wide: at length we reach the summit of the Cuesta, whence we have a beautiful and extensive view on both sides: on the north we perceive the rich valley of Aconcagua; its extensively cultivated grounds, with its numerous orchards: the city of Santa Rosa, with its white steeples, the meandering river flowing through the valley, while the horizon is shut in by the lofty and serrated line of the vast Andes, in which the remarkable towering peak of Aconcagua forms a very conspicuous object. Turning towards the south, extensive plains are visible, as far as the eye can reach; these plains are not, however, quite level, but are frequently interrupted by undulations

and detached rounded hills of very small elevation compared with the stupendous mountains which surround them. Several of the detached hills, though rounded, are of a somewhat conical form. In the foreground is seen the plain of Chacabuco, which will for ever be celebrated in the historical annals of the country, as the spot where the victorious forces under the Generals San Martin and O'Higgins encountered the Spanish forces under General Marco, beat them, and opened to the patriots a free possession of the capital, and thus laid the foundation of the independence of Chile.

The elevation of the highest point of this pass above the level of the sea is about 2896 feet, it is about 282 feet above the city of Santa Rosa, and about 757 feet above the post-house of Chacabuco. Here I found the brodiæa angustior.

The descent down the southern side of the Cuesta is still more zig-zag, steep, and rugged than the northern, but the path is no less broad and secure: on entering the plain, the road continues for some distance sensibly descending, at first is very narrow, but widens as we advance; it is stony and covered with thorny trees, but in the gullies upon the sides of the hills where small springs of water issue, a few evergreen trees grow: we pass by two or three miserable ranchos on the road, and at length reach the post-house of Chacabuco. This is eight leagues distance from the Villa Nueva de Santa Rosa. The post-house consists of a long range of buildings, having in front a lofty door-way, opening by a pair of large and clumsy wooden gates into a spacious

yard, enclosed on all sides by buildings, two sides of which, having corridors, are divided into a number of rooms for the accommodation of travellers. The buildings are all built of sun-dried bricks, plastered with mud, and not white-washed; the roof is covered with tiles: the apartments set aside for the accommodation of travellers are square, and have no light admitted into them but through the doorway; the floors are of burned bricks, and are never swept; the only furniture in each room is a small lofty table, with two rude arm chairs, and two equally rude bedsteads, without beds, and filled with vermin.

The class of persons who usually travel between Santiago and Aconcagua, who put up at the posthouse, carry their beds with them, and generally their suppers also, so that the postmaster is never prepared to afford any assistance to a foreigner who may stand in need of either bed or food, and a traveller who goes unprovided will be disappointed in these respects: upon the many occasions which I have travelled this stage, and when I have been induced to put up here, I could seldom obtain more than mere alojamiento, or a place to put my bed and provender for my horses; oftentimes no food, not even bread was to be procured; the charge for the use of this alojamiento, or bare room, is four reals, or two shillings: the feeding of horses is always charged at a very high rate. Leaving the posthouse of Chacabuco, the road passes over a kind of undulating stony plain interrupted by many detached rocky hills, and bounded upon the right and left by mountains of very considerable elevation:

but very small portions of this valley or table height are cultivatable from want of water; some few brooks flow into it, but they are very soon lost by absorption. Passing over about five leagues of this kind of country, and winding round the angle of a hill, we descend through a small ravine, and enter a wide level plain, extending as far as the eye can reach to the southward. We now approach many huts, and find all the northern part laid out in enclosures and cultivated. Proceeding about two miles through these cultivated enclosures, we reach the village of Colina, a small but long straggling place. Here a considerable quàntity of wheat is raised: the land is irrigated by many small rivulets and brooks, which flow from the Cordillera, the largest of which is dignified by the name of the river of Colina; these streamlets do not extend far, being entirely consumed in irrigation: the central portions of the plains are quite dry, and not capable of cultivation for want of water; they are covered principally with algarobas and espinos, thorny trees of the mimosa tribe, which afford shade to the cattle roving over them in search of the scanty pasture which is here produced; the western margin of this valley, opposite Colina, is cultivated in very small patches, where a few brooks ooze from the mountain ranges which skirt its margin: in the neighbourhood of La Lampe, more especially, irrigation is successfully carried on. The extent of the cultivated plains of Colina is about seven miles, and the breadth about five miles. On leaving them we enter upon sterile grounds of considerable extent

covered with thorny trees, to the farm of San Ignacio, distant three leagues from Colina and four from Santiago; here is a vineyard of some extent, and a considerable estate, which is irrigated by a small rivulet from the mountain range, which here juts more into the plain: this estate formerly belonged to the Jesuits. Skirting along close to the margin of the mountains, we again enter upon the sterile district, and pass on our right hand an insulated pointed hill, called from its shape Pande-Azucar, sugar-loaf-hill: hence all the way to the capital we see at almost every step cultivated enclosures, numerous houses, rude heavy carts drawn by oxen, and large troops of mules in motion; every thing indicates that we are approaching a considerable population: at length we enter lanes bounded on each side by lofty enclosures of great extent, formed of rammed earth. These enclosures are chacras or cultivated garden grounds. The number of houses increases as we approach the suburbs. At length we quit the gardens, enter the suburbs, cross the bridge of Maypo, pass along a few streets, and arrive in the Plaza, or great square of Santiago, the capital of Chile. On one side of this square is an inn kept some time ago by an Englishman, who used to afford comfortable accommodation to travellers.

Santiago will be fully described in a succeeding chapter; and I shall only further observe here, that the plain on which it stands is of great extent, reaching from the hilly district north of Colina to the river Maypo. The plain is about forty miles

in length from north to south, and about fifteen miles in width from east to west. It is bounded on the east by the Cordillera mountains, and on the west by a ridge of mountains, of which the Cuesta of Prado forms part.

A foreigner on his arrival at Mendoza feels himself at a loss, not knowing what course to pursue to facilitate his journey. In procuring an arriero, or muleteer he will find no difficulty, as a number of them are always on the look out for employment: in bargaining with them, it will be necessary to guard against extortion, as they make a practice of demanding from strangers much more than they have a right to ask. In the interval from the beginning of November to the end of May, that is to say, so long as the Cordillera is easily passable, the usual rate of hire is eight dollars for each mule employed, either for saddle or for baggage; the muleteer obliging himself to take a relay of extra beasts, to supply the places of those which become wearied on the journey: if the number hired be many, that is upwards of ten, the price ought not then to exceed five or six dollars each: the muleteer finds all the necessary peons at his own expence. By taking due precaution, the traveller will always find competition enough to prevent imposition. Should he have posted from Buenos Ayres on horseback, with merely a saddle and saddle cloths of the country, these may continue to serve him for a bed on his journey over the Cordillera; but it is far more comfortable in either case to travel with his bedding, which ought indeed to constitute an essential part of his luggage: a Creole, when travelling, packs up his mattress in a flat leather case, called

an almofrez, which laces up the middle with thongs, and encloses at the same time many articles of apparel: on arriving at the place of alojamiento, a spot is chosen as free from stones as possible, his peons unload his beast, throw down the almofrez, the top is unlaced, and the bed is in an instant ready for use. It is usual to place the mattress to the leeward of some large stone or other projection, to shelter the head from the strong blasts of wind which usually pour down the vallies of the Cordillera: a poncho will be found serviceable, but a light great coat is preferable at nights and mornings before the sun distributes its genial glow. During the day, even in the more elevated parts of the Cordillera, no additional clothing will be found requisite. Before leaving Mendoza, the principal care of the traveller should be the procuring of a sufficient stock of provisions for the whole journey, for it should be borne in mind that he will have to travel over 250 miles of very bad road, at a walking pace, without the least chance of procuring any thing whatever on the road; he will nowhere indeed, except at the very extremities of the journey, meet with an inhabited dwelling. For the information of novices, I shall, therefore, subjoin a list of those articles which seem most essential, viz.

A quantity of fresh beef.
A small quantity of charqui molido (sun-dried beef beaten to powder).
Dried tongues.
Bread and biscuit.
Cheese.
Rice.

Tea, or yerba, and sugar.
Onions, pepper, salt, &c.
Knives, forks, spoons, plates, &c.
An iron pot, a saucepan, and a calderito, which is a little copper vessel for quickly heating water for a matesito.
A tin mug.
A little wine or brandy.
A pair of chifles, or horns, for carrying wine or water.
A pair of large alforjas, or worsted saddle bags, which are very useful for carrying loose articles required during the day, as well as a stock of eatables; for it seldom happens that from sunrise to sunset the peons wait for refreshment: it is, therefore, advisable for the traveller in these intervals to trust to the store in his wallet.
A bullock's hide is of great use in covering each load, so as to protect it from the maltreatment it must be expected to receive.

All this may appear trifling, but to a novice undertaking the journey, who has been unaccustomed to provide such articles in travelling, the want of them may perhaps strike him only when it is too late to procure them. The muleteer during the journey will cheerfully perform the office of cook: his first care on arriving near the place of alojamiento is to dispatch forward a peon to light a fire, in doing which they are very expert: a cegar is lighted, a little dry mule's dung is crushed between the hands, laid in a small heap upon the ground, a few small twigs laid over it, and the end of his lighted cegar applied to the heap, which by great dexterity is

quickly blown into a flame. A canteen will be found the most useful appendage to a travelling equipage, and I should advise any one coming from England not to forget purchasing one; on all occasions, in moving about South America, it will indeed be most serviceable.

Mules are always preferred for travelling in the Cordillera, their footsteps are surer than those of horses, they are more cautious, and less startled in case of danger, and from their hardiness are better adapted to bear the fatigue and want of food they must endure in the journey; a horse quickly becomes tender-footed in treading over the loose sharp stones covering the tracts, and is soon rendered unable to walk: even the mule could not bear it unless it were shod.

The average rate of travelling in the Cordillera is thirteen leagues per day, which, considering the state of the roads, is good travelling. The customary stages of the arrieros are as follows:

Day		Leagues.
1st	Villa Vicencio	15
2d	Uspallata	15
3d	Penon Raxado	15
4th	Cuevas	14
5th	Guardia	13
6th	Villa Nueva	13
7th	Chacabuco	8
8th	Santiago	14
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It may be useful to look back, and generalize a few of the principal facts relative to the journey between Mendoza and Santiago, and of the country lying

between them: although the direct distance of these towns from each other is no more than forty leagues, the length of the road we have to traverse is estimated at 107 leagues: taking the distance of the principal points we have as follows:

From Mendoza to Villa Vicenzio	15	leagues.
Uspallata	15	
Punta de las Vacas ..	20	
Guardia	22	
Santa Rosa	13	
Chacabuco.....	8	
Colina	7	
Santiago	7	
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The following is a detailed account of the distances between the more remarkable places on the road; they cannot be said to be correct, as they were estimated only by the time occupied in travelling between each; it is, however, not very far from correct, as the jog-trot pace of the mule is more uniform than that of the horse.

From Mendoza to the point opposite the Calera, where the road diverges to San Juan	15	miles.
The Sierrillas	10½	
Coral Viego	13½	
Villa Vicencio	6	
Hornillos	9	
Foot of Paramillo, on east side.....	1	
Ditto on west side	9	
Aguita San Pedro	1½	
Minas San Pedro	1½	
Aguita de la Zorra	2	
Carried forward	69	

Brought forward	69 miles.
Aguita del Guanaco.....	5½
Entrance into the plain Uspallata ..	3
Puente de Piedra.....	7
Bobedas de las Fundiciones.....	4
Post-house of Uspallata	1
Rio Seco	10
Rio de los Chacayes.....	4
Rio de Picheuta	10
Laderas de las Cortaderas.....	10
Los Tambillitos	3
Ladera de la Jaula	3
Las Polvaderas.....	4
Peñon Rajado	2
Arroyo del Peñon.....	0¾
Manantiales	0¾
Paramillo de Juan Pobre, west foot..	2
Opposite Rio Blanco.....	1
Ladera de las Vacas.....	1
Rio de las Vacas	6
Punta de las Vacas	3
Casucha de las Vacas	1
Poralles de Pavo	7
Cerro de los Penitentes.....	1
Casucha de los Pujios	1½
Incas Bridge.....	2
Rio de los Horcones	0½
Opening de los Horcones.....	1
Las Leñas.....	4
Casucha del Paramillo	6
Casucha de las Cuevas.....	4
Foot of Cumbre, east side.....	1
Summit of the Cumbre.....	3
Casucha del Cumbre.	0½
Foot of Cumbre, west side	3
Casucha de la Calavera.....	1
Summit of Portillo	4
Casucha del Juncalillo	1½
Carried forward 198	

Brought forward . .	192 miles.
Casucha de los Ojos de Agua	10½
Guardia	13½
Estero de los Hornillos	½
Punta de las Quillais	8½
Summit of Alto del Puente	1½
Estero de los Papeles	8½
Ladera de los Papeles	1
Ladera de los Loros	1
Rio Colorado	5
Primera Quebrada	6
Puente de la Viscacha	3
Villa Nueva	9
North foot cuesta, Chacabuco	5
Post-house, Chacabuco	19
Post-house, Colina	21
San Ignasio	9
Santiago de Chile	12
Miles	321

TABLE I.

Barometrical Observations made between Valparaiso and Mendoza, at several Stations on the High Road over the Cordillera de los Andes, in the Months of October and November, 1819.

Height of Barom. in inches.	Degree of Thermom. Attached.	Degree of Thermom. Detached.	Stations.	Calculated heights above level of sea in feet.	Mean estimated height.
30·002	59	57	Valparaiso in a house.	30	—
28·683	68	57	Summit Cuesta of Valparaiso	1260	1260
29·023	62	60	Post-house Peñuelas	941	941
29·185	57	56	Casa Blanca	745	745
28·972	52	51	Vinilla	893	917
26·892	42	39	Ditto	942	
27·991	51	45	Summit Cuesta de Zapata . .	1850	1850
28·355	62	61	Curicavi	1560	1560
27·4	75	62	Summit Cuesta de Prado . . .	2543	2543
28·184	72	65	Post-house Prado	1773	1773
28,235	55	56	Santiago de Chile	1665	1691
28·188	62	65	Ditto	1727	
27·876	62	53	Post-house Chacabuco	2020	2139
27·318	70	56	Summit Cuesta de Chacabuco	2632	2896
27·473	58	56	Villa Nueva, Santa Rosa . . .	2422	—
26·898	70	67	Primera Quebrada	3050	—

TABLE II.

Continuation of the Series of Barometrical Observations over the Cordillera de los Andes, October and November, 1819.

Height of Barom. in Inches.	Degree of Therm.		Stations.	Calculated heights above level of sea in feet.	Mean estimated height.
	Attached.	Detached.			
27·808	69	71	Post-house Chacabuco.....	2139	2139
27·480	102	83	Villa Nueva.....	2590	2614
27·369	80	82	Ditto.....	2638	
26·831	82	80	Primera Quebrada.....	3215	3215
24·986	78	75	Guardia.....	5148	5148
23·507	75	79	Ojos de Agua.....	6874	6874
22·315	70	63	Casucha del Juncalillo.....	7730	7730
21·168	59	50	Casucha de la Calavera....	9450	9450
19·125	38	35	Summit of Cumbre.....	11920	11920
20·771	58	58	Las Cuevas.....	10044	10044
22·402	56	52	Near Estero de Santa Maria	7928	7928
22·973	66	63	Western foot of Paramillo de Juan Pobre, on river bed.....	7380	7380
22·542	69	62	Summit Cuesta Paramillo ditto.....	7888	7888
23·830	48	53	Tambillitos.....	6250	6250
24·164	61	60	Uspallata Post-house.....	5970	5970
24·712	68	66	Villa Vicencio.....	5382	5382
27·441	72	72	Mendoza.....	2553	2602
27·265	62	69	Ditto.....	2652	

The heights here given, though they cannot be offered as admeasurements, are interesting, since they afford useful approximations of the relative gradation of ascent. It was my intention to have verified them during my late journey by other more careful and extensive series of observations; but the haste with which I was obliged to pursue my route prevented me from accomplishing this object. The first series of observations here given extend only as far as the Primera Quebreda: I rejected all the others on perceiving that the cistern of the barometer was too much filled with mercury to allow the proper descent in the greater elevations: they were made in the end

of October, when I went over to Mendoza, to convey my family thence to Chile. While in Mendoza, I endeavoured to remove the obstructing cause in the best manner I was able; and, on my return in the beginning of November, I made the series of observations given in the second Table, which could not be continued beyond Chacabuco as I had there the misfortune to break the barometer-tube by the overturning of the vehicle conveying us towards Santiago.

Having given a particular account of the high road between Mendoza and Santiago, I shall now mention the several other passes over the Cordillera.

1. The pass of La Dehesa.—This is on the high road from Mendoza as far as the Punta de las Vacas, and hence up the valley of Tupungato, and the auxiliary branch of the Rio de los Penitentes, it crosses the main ridge of the Cordillera, near the source of the river which lies to the northward of Tupungato Peak; thence descending into the valley of the Dehesa, the source of one of the auxiliary branches of the Rio Mapocho, which flows immediately through the city of Santiago.

2. The pass of Los Patos.—This leads from the city of San Juan up the ravines leading to the sources of the river, crosses the main ridge to the northward of the Volcan de Aconcagua, whence it descends, through a series of ravines, into the valley of Putaendo, which is a more northern extension of the valley of Aconcagua. The river Putaendo unites with the river of Aconcagua a short distance from the town of San Felipe. On this road there is abundance of pasture and water, but it has the

disadvantage of crossing five different lofty ridges, and the still greater one of a much longer route: it is only followed by the muleteers who traffic between Aconcagua and San Juan.

3. The pass of the Portillo.—This is said to be the shortest and the best: it proceeds through Luxan, a village five leagues to the southward of Mendoza, crosses that river, and passes through the beautiful estate of the Tortoral, ascends the Cordillera, and finally leads to a high main ridge, branching from Tupungato towards the south east: the passage over this ridge is that of the Portillo; it is so called from the road being at one place so narrow as to allow only a loaded mule to pass: thence it descends to the bed of the river Tunuyan, not many leagues from its source, to the southward of Tupungato Peak; thence it ascends another lofty ridge, which is the main central chain of the Cordillera, here called La Cuesta de los Piuquenes, whence it descends the ravine of the Rio del Yeso, a branch of the river Maypo, into which it falls, and along the banks of whose stream the road tends, crossing subsequently the Rio Colorado, another auxiliary branch of the Maypo; thence it passes the Guardia, at the distance of four leagues from which the road leads into the extensive plains of Maypo: here it leaves the river, and runs eight leagues to the northward, until it reaches the city of Santiago: the distance from Mendoza to Santiago by this route is said not to exceed eighty leagues, and is easily performed in three days, whereas that by the way of the Cuevas takes ordinarily eight days. I have never yet met with any traveller who has given an accurate ac-

count of this road, but it seems that the Cordillera on the western side of Tupungato presents very extensive formations of gypsum; the valley of the Rio del Yeso, near its source, contains more or less of this material: the valley of Putaendo likewise, and the deep ravines stretching between the valley and the Peak of Aconcagua, contain, I am told, much gypsum. To return, however, to the road by the Portillo; it is necessary to observe that it is very dangerous to attempt its passage except in the three or four months of the summer season, part of the road is deeply situated between two ridges of mountains, attaining a very great elevation: in consequence of its immediate vicinity of Tupungato, this hollow between the cuestas of the Portillo and of Piuquenes is more subject to temporales, or snow storms, than any other part of the Cordillera; the falls of snow are also heavier, so that if the traveller should meet with bad weather in this part of his journey, the chances are that he would be buried in the snow, as no where is there the least shelter. No troop of mules ever attempts to cross the Cordillera by this passage;—the traveller whose curiosity induces him to do so alone passes by this road.

4. The pass of the Planchon is next in repute: it is, however, seldom travelled, and only by those who trade with the Indians of the Pampas. It commences at the town of Curico in lat. 34·50, passes up the river of that name, crosses two ridges of the Cordillera, in the course of which are seen both the peaks of the Descabezado and the volcano of Peterva, which is said to be always smoking. After

passing the second ridge, the road leads to the valley De los Ciegos, in the Pehuenches territory, and thence by the fort of San Carlos to Mendoza. The Cordillera, by the pass of the Planchon is described as being much lower than that about the Cumbre of Las Cuevas, and is said to be more gentle in its ascents and descents.

5. The pass of Antuco affords yet more facilities for commercial intercourse than any of the before-mentioned passes. Many Chilenos have attempted to persuade me that the Cordillera, in the latitude of Conception, is almost lost in low hilly undulations; so much so, that the river Biobio rises on the eastern side of the Cordillera, flows some distance towards the Atlantic, then turns towards the west, and passes through the mountains of the Andes. I have been seriously assured of this by many Conception men of considerable credibility, but this is decidedly incorrect and undeserving of credit. I have, however, gathered much more probable information from a native who has travelled over this pass, from whose account I conclude that the Cordillera range about the province of Conception is not less than 8,000 feet above the level of the sea: but what distinguishes this pass from all the rest is, that, while the others follow up the broken courses of the river beds till some ridge of precipitous ascent is to be crossed, and thenceforward along the same continuance of gullies, the Antuco pass follows the brow, or summit, of one of the lateral branches tending from the central chain towards the plains of the sea coast, by which means the ascent is more gradual, more even, and more easily accomplished by

animals. The Antuco road commences at the junction of the La Laxa with the Biobio river, pursues the summit of a cordon, crosses the main chain without meeting with steep declivities, and descends the opposite side by the same kind of ridge: so gentle is the ascent said to be, that carts may be made to pass without difficulty; the road, moreover, is said not to be stony; but little rock is seen, the mountains, presenting rounded surfaces, are covered with a fine black earth. Along the whole of this pass, good pasturage is found. This road is said to present a much nearer and more easy communication between Chile and Buenos Ayres; the distance from this latter city, across the pampas to the foot of the Cordillera, runs in a more direct line, does not exceed 120 leagues, and the distance across over the Cordillera, as far as Conception, is not more than 80 leagues—in all 200 leagues: while the length of road from Buenos Ayres through Mendoza and Santiago to the shore of the Pacific at Valparaiso is above 440 leagues. In the year 1806, the President of Chile dispatched Don Luis Cruz, now a general of the Chileno patriot forces, with a commission to survey and report upon the practicability of establishing a carriage communication between Conception and Mendoza, by the pass of Antuco: his report, I am told, was very favorable, and it is said he actually conveyed carts across the Cordillera; that he pursued this course in a direct line towards Buenos Ayres without any serious impediment, until he reached a spot somewhere to the southward of the lakes of Melinque, where the Indians opposed his further progress, and he was induced to direct his steps towards the high post-

road, by which route he returned to Chile: he came back satisfied, however, that far greater facilities for the passage of carts was to be found by this route than by the tracts hitherto followed: however true this may be, little expectation of its realization is to be expected from the backward and uncertain condition of both countries, and from the danger likely to be experienced from the Indians.

I have hitherto spoken only of the passage over the Cordillera during the periods when the roads are clear of snow: in the months from June to September, the passage cannot be effected without considerable personal exertion, much delay, and at a far greater expence: at these times the vallies on both sides of the Cordillera as well as the Cumbre itself are deeply covered with snow, so as to be impassable by mules: in this case it is necessary to travel on foot the whole way from the Punta de las Vacas to the Guardia, a distance of sixty-six miles. On these occasions it becomes requisite to hire peons to carry the provisions, baggage, and saddle equipage, which of course is attended with considerable expence. Since the establishment of foreign commercial houses in Chile, the passage of travellers and expresses across the Cordillera, in the winter season, has become more frequent. The courier too passes and returns regularly every month: the Spaniards always entertained too much dread of the cold to venture upon a journey attended with so much inconvenience and personal exertion. The fatigue of walking such a distance over loose snow is certainly considerable; but perhaps the greatest inconvenience experienced is the painful inflammation pro-

duced in the eye-lids from the effect of the too powerfully reflected light, proceeding from the brilliant whiteness of the snow, which, in intervals of fine weather, is generally increased by the immediate reflection of the solar rays. These effects might perhaps be prevented by the use of goggles of green glass. Should the weather threaten an approaching temporal, it is always prudent to hasten for the nearest casucha, and take advantage of that shelter till the storm has passed over, and the sun has again begun to shine in a cloudless sky. I have known persons who have been detained a week in one casucha, and a fortnight in another: this indeed frequently happens to the courier, so that the delivery of the mail is retarded for six weeks or two months, in cases of very bad weather. It is however possible to pass from the Guardia to the Punta de las Vacas in five days, should no impediment from the weather intervene, and should the snow have become tolerably firm upon the surface. Great fatigue is experienced in the ascents: the descents would perhaps be more laborious, but for a contrivance commonly practised by the couriers and peons accustomed to the journey: a sledge is formed of a piece of raw hide, upon which the man places his saddle-traps, or his load, seats himself thereon, lashing all firmly round his waist by hide thongs; having made this adjustment on the summit of the declivity, and suffering himself to slide down by his mere weight, he guides his course, or slackens the rapidity of his descent, by plunging his large knife, which he firmly grasps in his hand, into the snow: the resistance thus produced sufficiently retards his progress, should

he have acquired too much velocity; or, like a rudder, it inclines his course to the right or left, as he may desire: the labor of the journey is thus reduced. The traveller has nothing to fear from avalanches of snow, which are unknown, or are at least of trifling magnitude, and out of the reach of his track. The snow of the Cordillera does not, like that of colder latitudes, remain long in a soft state. Soon after it falls, the sun has sufficient power to melt the surface of the snow, which, in this half-fluid state, filters into the porous mass beneath, and, freezing again, converts the whole into a compact hard body; and it thus becomes so consolidated as to require the heat of an almost vertical sun before it finally disappears from the surface of the mountains.

The cost generally attending the passage of a traveller across the Cordillera, during the winter season, is 350 dollars, about 70*l.* sterling; while at other seasons, with the same luggage, that is, no more than is necessary for his journey, the expence of his passage ought not to exceed twenty or thirty dollars, 5*l.* to 7*l.* 10*s.* He cannot set out on his journey, in winter time, without having made previous arrangements which will detain him in Chile or in Mendoza several weeks. He will travel from Mendoza as far as the Punta de las Vacas with mules; the intermediate space of snow which cannot be traversed by animals is then performed on foot, as before described, until he reaches the termination of the icy barrier, which generally is about the Guardia or the Ojos de Agua, at which place the mules purposely brought from Aconcagua are in readiness to convey him to his ultimate destination.

CHAPTER VIII.

SANTIAGO TO VALPARAISO.

Road from Santiago to Valparaiso by Casa Blanca.—Post-house of Podaguel.—Cuesta and Post-house of Prado.—Gold Mines of Curicabi.—Cuesta of Zapita.—Casa Blanca.—Las Tablas.—View of Valparaiso.—Road from Santiago to Valparaiso by the Dormida.—Polpayco Lime Works.—Tiltil.—Cuesta Dormida.—Limache.—Concon.—Valparaiso.—Table of Distances between Santiago and Valparaiso.

ON leaving Santiago, the route lies between lanes formed by the walls of cultivated enclosures, the course is then, for about a league, over an undulating and arid plain, having crossed this plain we arrive at the Barranca, so called from a deep channel which serves during the rainy season to carry off the surplus water from the river Mapocho; at all other times the Barranca is dry, the whole of the water of the river Mapocho being consumed in irrigation. At the Barranca are several farm houses. The road for the next two leagues continues over the same dry barren plain till we reach the lake Podaguel and the bed of the river at the same time. This river swells considerably during the rainy season from the surplus water brought by the rivers Colina and Lampa, but during the greater part of the year the river bed of Podaguel is completely

dry. The lake Podaguel is at all times filled with water: the road passes by its southern extremity. We have now arrived at a prominent extension of the mountain range. Upon its margin, immediately overhanging the lake, stands the post-house of Podaguel, which is merely a rude and miserable hut, where the government courier obtains a change of horses: a traveller, however, who depends upon hiring horses at what are called the post-houses upon the high roads of Chile will be disappointed. This place is only to be noticed by the traveller for the name it bears, and not for the accommodation the postmaster can afford, for he can really give none whatever: very few of the postmasters can even afford a supply of food for the horses. The natives of Chile generally travel with their own horses, but since so many Englishmen have visited the country, there is such constant passing and repassing of foreigners between the seaport and the capital, that the accommodations upon the road have changed their character. Some of the merchants who use great expedition in travelling, and who are frequently going backward and forward, keep horses upon the road at about six equal intervals, the postmasters engaging to procure fodder for them; but others are in the habit of hiring horses for the journey from persons who have establishments in Santiago and Valparaiso, and who for a certain consideration will place two extra horses upon the road, one at Bustamente, the other at Casa Blanca, at which places there are houses where the animals can at all times be provided with fodder. The road

from the post-house of Podaguel to that of Prado is three leagues: though somewhat undulating, it is tolerably level, crossing a plain covered with thorny trees; it is shut in on all sides by mountains of considerable elevation. Proceeding in a westerly direction, we reach the foot of the mountain range, where there is a hut, the residence of the post-master and his family. This is seven leagues distant from Santiago. The height of this hut above the level of the sea is 1773 feet, and eighty-two feet above the level of the city of Santiago. Immediately upon leaving this post we ascend the road of the Cuesta, which is cut out of the side of the mountain range, and winds in a zig-zag direction up to its summit, whence we have a fine and extensive view over the surrounding country: towards the coast is seen the large plain before described, in the midst of which is seated the metropolitan city, with its numerous white-washed spires; the horizon in that direction being bounded by the great chain of the Andes, in which everal remarkable peaks are visible, and among them the Volcan de Aconcagua. On the other side is seen the plain of Poangui, with the mountain ranges which bound it: the road over the Cuesta de Zapata is also distinguishable. The height of the summit of the Cuesta de Prado is 2543 feet above the level of the sea, and 770 feet above the post-house of Prado. The descent of the Cuesta is a ziz-zag road similar to that on the opposite side; this road is at least twelve feet wide and very level; the inclination is sufficiently gentle to allow of the ascent and descent of the heavily laden rude carts of the country drawn by oxen,

which travel between the capital and the seaport. Having accomplished the descent, the road continues through a tolerably broad ravine, whose level bottom is covered with thorny trees; this continues for about a league, when we enter the extensive plain of Poangui, which is covered with thorny bushes: these plains are for the most part divided into large enclosures, used for the maintenance of cattle; the fences are made of dried branches of espino stuck upright. The road for the next two leagues, as far as Bustamante, is a lane formed by these enclosures. There is another road called the Old Cuesta, much frequented by travellers, as it is the shortest; it proceeds from the top of the Cuesta of Prado, and runs near the summit of the mountain range for about a mile and a half; it then descends by a very zig-zag, narrow, stony, and steep path into a ravine covered with thorny trees. This road is seldom frequented by loaded mules, on account of the steepness and narrowness of the path. After leaving the level ravine, we enter the ordinary cart road, just before it reaches the post-house of Bustamante. This post-house is one of the best in Chile, it is four leagues distance from the post-house of Prado, and eleven leagues distance from Santiago. The people are extremely civil, have always abundance of provender for the horses, and good Chileno fare for travellers. The accommodation is very miserable, and truly Chileno; the travellers' room is a dirty chamber, about twelve feet square, having on two of its sides a bedstead formed of stakes, driven into the ground, on which canes laid across form the bottom. The furniture consists of a small

high table and two large wooden arm chairs. The traveller is here supplied with tea, coffee, an asado (roast mutton), the common dishes of the country consisting of stewed meats, eggs, bread, butter, and cheese, will be served up on a dirty table cloth; every thing is very dirty and disgusting to a new comer, but a foreigner who has been long in the country will be well pleased at finding at this post-house such fare as he will no where else in travelling over Chile meet with. Leaving the "fonda" or inn of Bustamante, we pass over the plain which is enclosed on both sides of the road by dead wood fences, and at the distance of three leagues reach the small village of Curicabi, where there are about thirty huts and a turretted chapel: each hut has a garden irrigated from the river Poangui; vineyards are attached to several of these possessions. At no great distance from this village there are gold mines and a trapiche; the mountain ranges which skirt these plains are all of syenitic granite, which in some places has very minute particles of auriferous pyrites disseminated through it: the extraction of the gold is attended with much labour; and as the miserable people in their present situation value their labour very little, the produce is sufficient to support their wretched existence; as the demand for labour is increasing, these mines will soon cease to be worth working.

The river Poangui takes its rise in the adjacent mountain ranges, flows down the ravine seen to the northward, passes through the village of Curicavi, and runs through the plains of Poangui, where it is almost lost by absorption and evaporation; very

little water therefore reaches the river Maypo, which forms the southern boundary of the plain of Poangui. The height of the village of Curicavi above the level of the sea is 1560 feet; it is 131 feet below the level of Santiago. After leaving Curicabi the road still tends to the westward, through the same description of country covered with thorny trees; the road is inclosed by two continuous hedges of dried branches. Among the most remarkable flowers seen here, are the eccremocarpus scaber, the loasa volubilis, numerous varieties of alstræmeria, many beautiful calciolarias, the brodiæa ixioides, several amaryllides, and many others. The road is soon bound in on both sides by hills, and becomes very undulating and broken; the evergreen trees increase in number, and the fine laurel (laurus lingui) is seen in abundance: the molle, (schinus molle), the bollen, (kageneckia glutinosa), laurus peumo, laurus aromatica, canelo, (drimys chilensis), quillay, (smegdadermos quillay), and many others. Those trees are seen principally upon the hills, or rather in the narrow gorges and sinuosities in the sides of the mountains. We at length approach the foot of the cuesta of Zapata, the approach to which is over the undulating ground: the broken mountainous country, covered with evergreen trees, is extremely beautiful. The ascent of the cuesta is by a zigzag road, cut out of the side of the mountain similar to that described at the Cuesta de Prado. Upon this cuesta are seen all the three varieties of the Chile aloe, the pourretia coarctata, P. cærulea, and P. rubricaulis, the two last named varieties are quite novel; the rubricaulis is very rarely met with in this part of Chile, but it is more

common in the northerly jurisdiction of the country. The view from the summit of the cuesta is very beautiful; that to the eastward commands a view of the plains of Poangui, with the mountain ranges of Prado in the back ground, surmounted by the more lofty and towering peaks of the great Cordillera. To the westward is seen the plain of La Vinilla, through the middle of which is observed the continuation of the road thirteen miles long, and as straight as an arrow, the village Casa Blanca being distinctly seen at the end of it. The height of the Cuesta de Zapata is 1850 feet above the level of the sea, 290 feet above Curicavi, 933 feet above La Vinilla, and 1105 feet above Casa Blanca.

The descent of the Cuesta is tolerably gentle, the windings are more regular than on the other side, and the depth considerably greater. The road to Casa Blanca is skirted on both sides by dead wood fences. The distance to La Vinilla from the foot of the cuesta is four miles; the descent to it is considerable, and not regular, but by numerous long platforms, or successive steps. The post-house of La Vinilla consists only of two huts. It is seldom used by the traveller, and the postmaster is rarely prepared to afford the smallest accommodation. The elevation of this spot above the level of the sea is 917 feet, and 172 feet above Casa Blanca. The enclosures on each side are used only for the rearing of cattle: the pasture is poor, but the thorny trees afford to the animals an excellent shelter from the scorching influence of the sun. At the distance of three leagues from La Vinilla we enter the village of Casa Blanca, which, by the Chilenos, is dignified

with the name of town: it is a very miserable place —more so since the great earthquake of November, 1822, which threw down all its buildings; but few of these have since been rebuilt, and the place bears a very desolated aspect; the houses are constructed of sun-dried bricks, some few are whitewashed, but, generally, they are left of their original mud colour. There is a kind of inn in this place kept by a man, half-Englishman, half-Portuguese, who affords tolerable accommodation to the traveller, but his charges are very high. The height of this village above the level of the sea is 745 feet. In its neighbourhood are several farms, famed for the rearing of cattle; much butter and cheese are there prepared for the supply of the market of Valparaiso. Leaving Casa Blanca, the road continues to the NW for three miles in a straight line; when we reach a branch of hills of small elevation, but of considerable breadth, separating the plain of Casa Blanca from that of Las Tablas, a distance of nearly twelve miles: the road over this hilly district is very undulating and tedious, but the eye is relieved by the agreeable scenery, varied by numerous evergreen trees; among these are the carontillo (carontillea.)

At a spot about half way to Las Tablas is a ravine opening to the southward, forming the old cart road to Melipilli. On the road are several miserable huts and farm houses. The post-house of Las Tablas is a mere hovel, and the postmaster is never prepared to afford either refreshment to the traveller or his horses. The plains of Las Tablas are quite open, and tolerably level—upon these are seen herds of cattle and horses grazing. The road continues over

the plain for three leagues, when we reach the post-house of Peñuclas, seated at the foot of the cuesta of Valparaiso. This post-house is a mere hut, a sort of pulperia, where spirits and bread may be purchased. It is seated at an elevation of about 941 feet above the level of the sea. Immediately upon leaving this post-house we ascend the cuesta by a winding road; the summit is of considerable breadth, and its height above the level of the sea is 1260 feet, and above Peñuclas 319 feet. Upon reaching the first angle of the descent, we come to a spot which commands a fine view of the harbour of Valparaiso, with its shipping: it appears like a deep basin, bound in on three sides by an amphitheatre of hills; it is open to the northward, though partially closed in by the distant projecting points of Concon, Quintero, and the Papudes; to the eastward are seen several remarkable hills, among which are Manco, at Concon; La Campana, or bell mountain of Quillota; Las Ancas at Riculemu, and the still more striking object, the Peak of Aconcagua, in the central ridge of the Cordillera. The descent of the cuesta is irregular, very long and tedious: among the several shrubs seen upon its summit are the ribes glandulosum, and two or three varieties of berberis.

Having accomplished the descent of the cuesta, we enter the Almendral, where we may leave the reader, who will find the description of the place in another chapter, and return to Santiago, in order to describe another road to Valparaiso, by the pass of La Dormida.

The road by the Dormida has the advantage of crossing over only one cuesta, or great

mountain range, while that by way of Casa Blanca passes over three lofty cuestas. The road proceeds upon the highway to Colina for about five leagues, when it leaves it, bearing to the westward over the plains towards La Lampa. This intermediate plain is insusceptible of cultivation, but it is useful for pasturage ground for cattle, being tolerably well covered with trees of espino and algarroba, whose shades afford excellent shelter. There is no pasture except in the spring season, after the winter rains; during the remainder of the year it is a dry parched arid plain: this may be taken as a fair sample of the vallies, or intermountainous plains of Chile, more especially to the northward. Leaving the plain we cross a range of low hills, whereon the talguen (talguenea aggregata) grows with the mimosa and algarroba: we pass by the lime works of Polpayco. The small hilly ranges about here for the greater part consist of a dark gray primitive fine-grained limestone, which, being easily cleft into sharp angular fragments, is quarried from the surface without difficulty. About a quarter of a mile from the quarry is the lime-kiln, which is formed in the side of a hill, by digging out a chamber about fourteen feet square; three of its sides are therefore formed of siliceous limestone rock, while the front is built up of loose fragments of stone laid in mud cement, a hole being left in the bottom for discharging the kiln after it is burnt. The top is quite open and uncovered; it is charged from the high ground above it by alternately throwing in portions of limestone and algarroba wood, which is found in abundance in the neighbourhood.

The lime thus made is of excellent quality, not only for common masonry work, but as an hydraulic cement. This lime is sold on the spot, at ten reales, or five shillings per fanega, or two shillings the bushel; in Santiago it is sold for three shillings the bushel. These kilns afford to the proprietors of the Polpayco estate a revenue of ten thousand dollars per annum. About a league onward we pass the estate house of Polpayco, which offers nothing particularly worthy of notice; the ground around it is watered by the rivulet which comes from Tiltil, and flows hence towards La Lampa. At the distance of two leagues beyond Polpayco, and fourteen leagues from Santiago, we arrive at the village of Tiltil, leaving upon the left on the way to it the ravine of the Duraznal, where there is said to be a rich gold mine overflowed with water. The village of Tiltil is seated in an angle of a plain, about two miles square, formed by an elbow of the narrow valley. It is wholly inhabited by persons employed in the mines of the Marquesas and Tiltil. These mines are not rich, and are very scantily worked, so much so, that whenever I have passed by this place the trapiches and amalgamation works were idle. The ore is a decomposed syenitic porphyry, in which are disseminated particles of gold, so small, that the eye can scarcely see them; and sometimes veins of very poor auriferous pyrites are met with. The principal mines are situated in the same high ledge which connects the cuestas of Chacabuco and Dormida. The ore is brought a distance of six miles on the backs of mules to Tiltil, where the gold is extracted. In a range of hills between Chacabueo and Tiltil, at

the distance of about eight miles is the poor silver mine of Runghio—it is wrought to a small extent, the ore being carried to La Lampa, a distance of eight leagues from the mines, and four leagues from Polpayco, where there is a trapiche, and a man who understands the extraction of the silver. A little to the southward of Tiltil is a very poor copper mine, the ore of which is carried by the road of the Tavon, to the trapiche of Panxegua, or that of Catemu, and there reduced.

Leaving Tiltil, we gradually ascend the valley towards the cuesta of La Dormida, and at the distance of about three leagues reach the lavaderos of the Asiento Viejo, where a few cottages are hidden amidst the luxuriant foliage of the beautiful evergreen trees and shrubs, and graceful climbing plants which cover the valley. Nature here distributes her bounties with a lavish hand, which but ill accords with the poor, ill-formed, dirty, miserable, and idle peons, who waste their useless lives in this delightful place. The mountain sides are completely covered with foliage; the numerous little springs protected by this shade from the drying influence of the sun flow throughout the year. The mountain formations bounding the valley are of decomposing syenite, containing an excess of hornblend, the decomposing tendency of which, assisted by the moisture oozing through its entire mass, has reduced the surface, to a great depth, to a somewhat loose ferruginous clay, which interposes between the small masses of angular stony fragments, into which the rock has become decomposed. The small springs which fall into the ravine from the mountain sides

bring down with them a great quantity of earthy matter, in which minute particles of gold are found; this is the kind of lavadero, or gold-washing, common in Chile. From this place we immediately begin to ascend the cuesta, the road up which is tolerably gentle, and the scenery at every step beautiful; the path is very narrow, and winds from side to side, being in some places so contracted that only one animal can pass at a time. The trees and shrubs which cover the mountain are numerous, and the way is adorned by many beautiful flowers, among which are two large and handsome varieties of mutisia, called by the natives, estrella; M. cirrhosa, and mutisia uncinata. The height of this cuesta is perhaps 800 feet above its base, and 2700 feet above the level of the sea. The view from the summit is magnificent; on the west is seen the rich plain of Limache, in all its windings, and beyond it the opening of Concon, bounded on the horizon by the Pacific Ocean; on the northwest is seen the elevated peak of the Campana, or bell mountain of Quillota, with the rising points of the Ocoa and Llaillay cuestas. On the eastern side is seen the valley along which we have passed, one mountainous point receding beyond another, the horizon being bounded by the distant Cordillera, which in the spring months is wholly covered with snow. The summit of this pass is, however, considerably lower than the adjacent parts of the ridge on the northwest, as the high point separates this pass from that of the Tavon, while on the southward the ridge rises suddenly to the height of several hundred feet, forming a hunch-backed eminence called El Cerro de la Viscacha. The

descent down the western side is somewhat longer, narrower, more winding and stony than that on the other side. On reaching the bottom we arrive at the hacienda house of the Dormida estate, which is seated at the head of the ravine, and is almost hidden among a luxurious varied and beautiful evergreen shrubbery;—the house itself is insignificant. The road now follows the course of the ravine for two leagues, when we reach an angle formed by the junction of this with another ravine called La Quebrada de Alborado, at the summit of which are some poor gold mines and lavaderos. From this angle, where there is a small village, consisting of about twenty huts, the mines may be seen at a considerable elevation upon the western declivity of the Cerro de la Viscacha; they are poor, and very scantily worked. From the point of junction of the two ravines the valley makes a somewhat angular turn through a more extended opening, which continues to widen itself as it approaches Limache; its direction is somewhat tortuous from the alternate extension of the points of the mountain ranges which skirt the valley; the road is for the most part stony and covered with bushes, but in those spots where the proprietors have chosen to avail themselves of irrigation, the ground has been made very productive: wherever the water of the Estero, or rivulet, has been turned upon the soil, it has produced the most fertile grounds, and the most abundantly productive gardens in Chile.

The valley of Limache is indeed proverbial in this respect throughout, the country being so sheltered, that in the three late successive years of blight

which prevailed over most parts of the country, this was one of the few spots where the crops never failed. The valley is divided into different estates, and where the houses of the proprietors are fixed, there are small portions of cultivated ground: such, for instance, as at Pelumpen, a league and a half from Quebrada de Albarado, and Umue, at the farther distance of two leagues. The latter spot is a beautifully sheltered hollow at the foot of the Campana mountain; it is irrigated by little streamlets, which flow from the ravines of the mountain. The village of Limache is at the distance of two leagues from Umue; here the valley attains its greatest width; the richest farms are here, upon which are grown much garden produce, sent for sale to the market of Valparaiso, at a distance of twelve leagues. This produce is conveyed by mules. The crops of fruits and vegetables are much earlier than in other parts of the province. The village of Limache is very irregular; the houses are small, very miserable in appearance, the people more ignorant and brutal than in most other parts of the country. It is subject to the government of Quillota, under the superintendance of a juez, or constable, whose interest it is to encourage all kinds of vice and immorality. Limache lies about six miles to the southward of the town of Quillota, from which it is separated by the low cuesta, forming the southern termination of the Campana range; over this hill a tolerably good road leads to Quillota. In the opposite direction another road tends over the more lofty cuesta, or mountain range, to Casa Blanca: the ravines which

lead up to this cuesta produce much thorny wood, principally the talguen (talguena aggregata).

The valley of Limache becomes very narrow at some little distance to the westward; and the Estero continues its course along a confined and winding channel formed by the low adjacent hills for the length of five leagues, when it falls into the river Concon, which stream has been before described as the river flowing through Aconcagua. The road, however, passes over the long range of hills, and we come into the valley of Concon at Tavolongo. From this part of the valley, we perceive a beautiful cultivated and rich country, through which the river flows with great rapidity, dividing itself at times into several branches, and winding in many capricious turnings till it finds its way to the sea. The Pacific Ocean is distinctly seen at the termination of the valley, and the view, in all directions, is beautiful. From Tavolongo we travel two leagues, pass the estate of Colmo, and reach Concon. At this place I resided several years. Concon is at about an equal distance from Valparaiso and Quillota, being six leagues distant from both these places. At Concon we leave the valley, ascend the hills, and proceed in a southerly direction towards Valparaiso. The road is over an elevated table height for about two leagues, it then descends to a spot called Reñaca, a small ravine cultivated in some parts: here are a few cottages. It then ascends another table height, and descends by a long and tedious cordon to a sandy flat near the sea-beach, which is the termination of a long ravine, whose summit is at a spot called Reculemu, whence the Estero takes its rise, flows

through Margamarga, Cupuè, and finally discharges itself into the sea at the spot called La Viña de la Mar. In the midst of this sandy flat and upon the border of the Estero is the house of the proprietor of the estate, Don Juan Antonio Carrera, a relative of the individuals of the same name, who took a leading part in the first revolutionary movements of the country, and for a considerable time maintained the chief political sway in Santiago. The distance hence to Valparaiso is two leagues and a half over the broken and hilly points near the sea which skirt the margin of the great cuesta: the road is very bad, presenting successive and continued rugged ascents and descents. This road was a few years since so good, that carts could travel on it; but from neglect it has become so ruined, that in some places, it is difficult for even a loaded mule to pass. After proceeding over this broken road, called Las Siete Hermanas, we descend upon the sandy beach of the Almeudral, and arrive in Valparaiso.

Table of Distances of the Places between Santiago and Valparaiso, by the Road of Casa Blanca.

From Santiago to	Leagues.
Barrancas	2
Podaguel	2
Prado, eastern foot of Cueste	3
Bustamanti post-house	4
Curicavi	2½
Vinilla	3½
Casa Blanca	3
Carried forward	20

Brought forward...	20
Tablas	4
Penuelas	3
Valparaiso	3
	30

List of Distances of the Places between Santiago and Valparaiso by the Road of La Dormida.

From Santiago to	Leagues.
San Ignacio	4
Polpayco	8
Tiltil	2
Asiento Viejo	3
Dormida	2
Quebrada del Alborado	1
Pelumpen	1½
Umuè	2
Limache	2
Concon	5½
Reñaca	2
Vina de la Mar	1½
Valparaiso	2½
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CHAPTER IX.

CHILE DESCRIBED.

Limits.—Proportion of cultivatable Land.—Climate.—Earthquakes.—Great Earthquake in November, 1822.—Diseases.

CHILE is situated on the western shore of the continent of South America, bordering upon the Pacific Ocean; its boundaries are well defined: it is in the form of a long parallelogram, whose length, running north and south, is nine times greater than its breadth: it is comprised between the twenty-fourth and forty-fourth degrees of south latitudes; and between the longitudes of sixty-nine and seventy-four degrees west of Greenwich: on the north it is bounded by the great and almost impassable desert of Atacama, which separates it from Peru; on the west by the lofty towering barrier of the Cordillera de los Andes; on the south by the gulf of Guaiteca, and the archipelago of Chiloe; and on the west by the great Pacific Ocean. Hitherto the accounts of this country have been formed upon imperfect knowledge of its topographical character; it is not, as has been supposed, formed by a series of table heights, reaching from the sea to the foot of the immense Cordillera; but it is a broad expansion of the mountainous Andes, which spreads forth its ramifications from the central longitudinal ridge, towards the sea; these branches diminish continually, but irregularly, till

they reach the ocean. This inclining extension of mountainous country can be considered in no other view than as part of the Cordillera itself, divided transversely by several high ridges and corresponding hollows, which do not, however, proceed in a direct line, but extend in variously tortuous courses towards the sea. These mountain branches are of considerable height, being seldom less than 1,000 feet, and more generally 2,000 feet above the bottom of the vallies which intersect them: it may therefore be readily conceived that there is but little level country between the smaller branches of these chains; the more valuable portions were formed by the beds of the rivers now comparatively small, although there is evidence of their having been once the courses of greater streams. Some of those vallies present broad expansions of surface, such, by way of illustration, as that portion of the country called the valley of Aconcagua. These are the patches which constitute the finest and boasted portions of the middle portion of Chile.

The vallies being considerably inclined, admit of irrigation wherever water can be procured. The hilly parts, being dried and parched during the greater part of the year, cannot be cultivated. It is probable that not a fiftieth part of the northern half of Chile can ever be cultivated. But southward of the river Maule the proportion of cultivatable land is larger.

The climate of Chile is unquestionably one of the finest and healthiest in the world: if, with an equal degree of truth in other respects, it approached in excellence the correctness of what in this particular

is stated of it, the country would deservedly merit all the eulogiums which every traveller and historian has pronounced upon it. The temperature of that part of Chile near the sea coast is even finer than that of the interior, being less subject to variations from heat to cold. The months of January and February are the hottest; at this season of the year in the interior, the thermometer frequently rises to 90° and 95° Fahrenheit in the shade; but however sultry the day, no sooner has the sun set, than there arises a most delightful breeze, which cools the air, and renders the night pleasant and refreshing: so insufferable indeed is the heat of the day at this time of the year, that the people seldom stir out; they close the doors and window-shutters of their houses, to keep out the heat; no individual is to be met with in the streets; nothing, say the natives, "except Englishmen and dogs;" but in the evening the gay period arrives: it is then the world appears to be let loose; the shops are lighted up, the streets crowded with females, unattended, parading from shop to shop, for the men never walk with the women; the public walks are crowded with people of all classes, who meet to enjoy the recreation of the cooling breeze. This continues till near midnight, when, after partaking of a hearty supper, they retire to their beds, often laid in the open air, from which they again rise at day-break in the morning. The shortness of rest procured during the night is relieved by the long sleep taken during the heat of the day. It is customary to dine at 12 or 1 o'clock, and all, without exception, make it a rule to sleep from that hour till sun-set. The temperature experienced

near the coast during these sultry months is much cooler during the day; the hottest period is usually before 10 o'clock in the morning; generally about this hour a strong wind arises in the southward, which cools the air agreeably: in Valparaiso, however, it is difficult to say which is the more disagreeable, the ex- excessive heat or the excessive wind. During the day it blows so violently as to raise a cloud of sand in the air, which renders it very unpleasant to stir out of doors; and even within the houses the quantity of dust brought by the wind causes considerable annoyance. The temperature of the coast in summer time frequently rises to 85° during the day, and 70° to 75° during the night. The months of March and April are much more temperate, especially in the interior; during the latter months the rains generally set in. The months of June and July are the coldest; but in the day time the atmosphere does not even then feel chilly, except during the time rain is falling. Rain is seldom known to fall except in the months between May and August, and the number of days on which it occurs is seldom more than twenty throughout the year; but it happens, on some few occasions, that the number of rainy days in the year is between forty and fifty; these seasons are however extremely rare, and are always followed by diseases, and a general failure of the crops: the driest winters are usually succeeded by seasons of the greatest abundance. The rain, which is very heavy, seldom falls for more than three days continuously. If the observations made by an intelligent friend be correct, we may suspect that the quantity of rain that actually falls during the year in this extremely dry cli-

mate is not less than the total quantity which falls in the rainy and humid atmosphere of England. The country, from its excessive hilliness, presents so few outlets for the drainage of the rain, that the floods are frequently very destructive, sweeping away the soil of extensive portions of cultivatable ground. This is the more to be regretted in a country which presents a very small portion of surface capable of irrigation. During the time that rain continues to fall, there is a general suspension of all active operations, from the head of the state to the poorest laborer in the country: the peon never stirs out of his rancho; in the town all the public offices are closed, the shops are shut up, the warehouses are unattended, and no one is to be seen in the streets. If the ground be wet, the women never stir out of doors; and the men, when the rain ceases to fall, are seen paddling along the streets in thick wooden clogs, and wrapped up in large Spanish cloaks, thrown round their shoulders, the cape muffling up their mouths, so as to preserve them from contact with chitte, the chilly and moist air.

The months of August, September, October, and November, are generally pleasantly warm and agreeable, although owing to the prevalence of the westerly winds during these months, the atmosphere is frequently hazy, especially early in the morning: the influence of the solar rays generally serves to dissipate the clouds by noon, when the fog seldom recurs before midnight: the prevalence of fogs in the summer is greater in proportion to the quantity of rain that has fallen during the previous winter. After

a dry winter season fogs are seldom observed in the day time.

On the coast I have never observed snow: in the interior plains, such as those of Aconcagua and Santiago, sleet sometimes is observed accompanying the rain; and when this occurs, all the neighbouring hills that attain an elevation above these plains of 800 feet, are covered with snow, which is dissipated by a few days' fine weather from all those parts of the mountainous ranges at a lower elevation than 5,000 feet. I have seen the bell of Quillota, which is not more than fifteen miles distant from the coast, covered half-way down with snow after there has been a heavy fall of rain in the valley beneath. In the interior parts of the Cordillera, snow falls at intervals during the winter, especially when it rains in the lower parts of the country. From June to November the more lofty ranges of hills to the eastward of Santiago, Aconcagua, and other parts of Chile, to which the name of Cordillera is more particularly attached, are covered with snow, which gradually disappears, by the influence of the sun before the month of December; in some of the deep gorges of the higher central ridge, having a southern aspect, it is not uncommon to observe extensive patches of snow as late as the months of January or February; but in no part of the Andes that I have seen does any snow remain beyond the month of March. In some seasons the Cordillera becomes difficultly passable as early as the middle of April, but this seldom happens until the middle of May. In the year 1819, I passed the Cordillera on

the 30th of May, when not the smallest vestige of snow was observable in any part of the Andes, although a heavy tempest had occurred only three weeks before, which, from the quantity of snow that fell, rendered the passage difficult for some days. The warmth of the ground, occasioned by its long exposure to the sun, had, as is usual, completely melted the snow at the commencement of the winter.

During the winter months, it is not uncommon in the interior of Chile to witness the formation of ice frozen during the night to the thickness of a quarter of an inch, but it is sure to disappear entirely in the course of the morning: near the sea-coast it seldom freezes, but ice has occasionally been seen about the thickness of a pane of window glass.

It is stated by the Abbé Molina, that the winter rains "are never accompanied by storms or hail, and thunder is scarcely known in the country, particularly in places distant from the Andes, where even in summer it is seldom heard." This is not, however correct in relation to the central parts of Chile; Molina, who resided entirely in the more southern provinces, may perhaps speak of the seasons there with greater correctness. In the central parts of Chile a winter seldom passes over without the rains being occasionally accompanied with storms of hail, thunder, and lightning. The lightning is remarkably vivid; and the thunder, owing to the rapid and continuous reverberation of sound among the many deep ravines of a lofty and hilly country is terrific. Rain seldom occurs in the winter season unless accompanied by storms and violent gales of wind from the north-

ward, a quarter from which the wind seldom blows without bringing with it bad weather.

In the evenings of summer time, storms of thunder and lightning are not uncommon in that part of the Cordillera lying between the main central ridge and the secondary range of mountains which runs parallel with it to the eastward, and in the centre of which the river of Uspallata flows. On these occasions may be seen, on summer evenings, throughout Chile, the reflection of the distant flashes continually illuminating parts of the horizon extending above the line of the Cordillera, but the scene of action is far too distant for us to hear the thunder, or to see more than a very remote reflexion of the lightning.

Whatever advantages Chile may present in the excellence of its climate, and the productiveness of so much of its soil as can be irrigated, they are more than counterbalanced by the earthquakes to which the whole country is continually subject; for of all our terrestrial phenomena, none can equal the frightful sensations of the violent agitations of the grounds beneath us, attended, as they are, by the loud hollow rumbling noise which accompanies them, and by the cracking sound of the materials of which the houses are constructed. Nothing can be more lamentable or awful than witnessing large houses, nay, whole towns, in a short space of time levelled to the ground, crushing perhaps in the falling ruins their miserable inhabitants: nothing can approach the consternation of the people, who, on the first alarm, rush into the open air with the greatest terror depicted on their

countenances, calling for mercy and salvation. Even the brute creation participates instinctively in the general panic; the animals, affrighted, run in all directions, sending forth moanful cries, as if conscious of the danger that awaits them.

Upon the first symptoms of an earthquake, all the natives rush out of their houses, fall upon their knees, beat their breasts violently, and cry aloud misericordia! misericordia! (mercy! mercy!). For three years I was mortified at their pusillanimity, and was frequently reprimanded for never stirring out of the house upon the occurrence of pretty smart shocks; but having been a witness of, and a sufferer by, the great earthquake of 1822, I confess that my courage failed me, and I was afterwards no less forward than others in flying out of doors on the slightest annunciation of an earthquake. The natives distinguish the shocks into two classes, the slighter ones are said to be "temblores," and those strong enough to produce fissures in the ground, or to overthrow or damage buildings, are called "terremotos." The temblores are of very frequent occurrence; their intervals are irregular; they happen at all hours of the day or night, and in every month in the year; sometimes, though rarely, at the distance of two months; at other times at the interval of every few days; while at others many frequently happen in one day. Sometimes there is an indication of their approach by a preceding rumbling noise, like that of a very heavy artillery waggon rolling quickly over a stone pavement at a distance: at other times, the schoks happen instantaneously, without any noise; and sometimes the noise alone is heard without the

slightest sensation of motion. I have noticed the occurrence of strong and frequent shocks in May or June, after the first falls of snow in the Cordillera; or in October or November, after a storm in the Andes. These observations, however, must not be taken as a rule, as they may have been mere accidental results: we cannot, indeed, reasonably expect to meet with any exterior prognostic of these phenomena, since they proceed from internal and subterraneous operations, the causes of which we can only conjecture. Captain Hall's observation is correct when he says that the susceptibility of persons to the approach of earthquakes increases by a continued residence in the country; it arises probably from the apprehension and a more constant anticipation of their occurrence, as well as from the observation of the greater uncertainty of their extent, their force, and duration. After the great earthquake of 1822, I never retired to rest without making preparations, in anticipation of their possible occurrence, by opening all the doors of the house, and clearing away chairs and tables, that we might not fall over them in running into the open air in the dark. Even in the soundest repose, I have generally found myself upon my legs, in the act of retreating from my room, without being sensible of any motion or the first indication of the rumbling noise preceding a shock, and have even reached the open air before I was awake, or before the shock itself has followed the noise. A person who has become alive to the feeling can acutely distinguish a slight shock, when another newly arrived, and a stranger to the sensation, will notice no motion whatever.

The great earthquake before alluded to happened during my residence at Concon, at the mouth of the Quillota, or Concon river. At half-past ten o'clock on the night of Tuesday, the 19th November, 1822, as my family were retiring, the first oscillation was felt. It was very sudden and violent; we were all alarmed, and paused for an instant, when the falling of the glasses from the sideboard, the cracking of the timbers of the roof, and the rattling of the falling tiles, caused us to rush out of the house. The earth was violently convulsed, heaving up and down in a manner hardly conceivable, and as little capable of being accurately described as our feelings. The timbers of a large corridor were breaking in all directions, and flying off in fragments, while the air was filled with dust from the falling roof. The situation of our two children instantaneously occurred to us. I rushed into the falling building, snatched one boy from one of the front rooms, and, carrying him in my arms, ran to the back of the house, where the other boy was in bed; my sensation in this painful situation cannot be imagined. I ran with my two boys to their mother and their aunt; and by the time I joined them, the great shock was ended; it continued about two minutes. After a lapse of about three minutes, the agitation returned violently, and continued for about a minute, when several of the strong pillars of the corridor were shivered. During this time there was a loud rumbling noise, like the distant echo of thunder in a mountainous country. The heaving of the ground seemed not only to consist of horizontal oscillations, but also of violent uplifting concussions, as if repeated explo-

sions were exerting their force upon the roof of a hollow cavern under our feet, threatening to burst open the ground, or blow us all into the air. Our sensations were truly horrible. There was nothing remarkable in the appearance or state of the atmosphere; the moon and stars shone with their usual resplendence. Anxious to ascertain the state of my mills, which were on the edge of the river, about fifty yards from the house, I proceeded towards the spot, and was met by my English workmen, who told me the building had been thrown down, that the walls on both sides had been precipitated into the mill-stream, and the roof had fallen in. While making a survey of the damage, another violent shock warned me of my danger; the mill at the time of the first shock was in action; the miller, a young man recently arrived from England, on hearing the first noise of the earthquake, concluded that a nail by some accident, had got between the mill-stones: he therefore shut down the sluice-gate, and raised the running-stone. At this moment the walls of the outer room fell, and caused him precipitately to quit the building. During three quarters of an hour we experienced continual and severe shocks, the intervals between which seldom exceeded five minutes, every time shaking down portions of the buildings. Our Creole servants walked about the inclosure almost in a state of despair, thumping their breasts, and repeating their Ave Marias. Another of my English workmen, who lived in a cottage close by, soon joined us; part of his house had been thrown down. The major-domo of the neighbouring estate, sent by his master, came to learn our fate, when we

heard that his house, as well as the chapel, had also been levelled to the ground. In the course of the night, a friend came from his residence at Quintero, a few miles to the northward, to ascertain what had befallen us—his own house, like our's, had been shaken to pieces; he informed us that the ground over which he had passed was much altered, and torn in many places in wide rents. . The sand-hills had been thrown into the Quintero lake, and the ford at the usual place across it was greatly swelled so that the water rose above his saddle. This appears to have been caused by an influx of salt-water into the lake, during the great rise of the sea which accompanied the first and most violent shock. At Quintero great part of the house was destroyed, and the family, consisting of my wife's sister, her husband, child, and servants, had escaped without much serious injury; though, in the endeavour to make her escape, a large book-case fell, knocked her down with her infant in her arms, and fell upon them. She was happily extricated from this perilous situation by her husband, with only a few bruises. We lighted a fire in the middle of our inclosure, and seated ourselves around it till the morning dawned, when I was better able to ascertain the damage that had been done. The house was not so much ruined as I expected; the outer walls were rent in several places, and the partition walls thrown down. I had recently put on a new roof of good carpentry, 120 feet long and 50 wide; and this was secured by the corridor, and strong iron ties running through the walls at proper intervals, and but for this we should probably have been all buried in the ruins of the

building. The ground of the yard to which we retreated was cracked in all directions. The mill-stream in many places was filled up by the falling in and collapsion of the banks. The ground between the mill and the river offered numerous evidences of the convulsions it had undergone: clefts above a foot wide presented themselves at the distance of every few yards, and in several places the ground itself had sunk two feet below its usual level. On many spots were numerous hillocks of sand and mud, which had been forced through the crevices. They appeared like mud volcanoes in miniature; some of these had again sunk, leaving in their places muddy pools. The tail course from the mill, which extended above 2,000 feet towards the river, was filled up, and made level, partly by the collapsion of its bank, and partly by its bottom being forced up by the earthquake. In the course of the next day I learned the fate of the towns of Valparaiso, Quillota, Casa Blanca, and Limache; all these towns had been destroyed, together with a great number of persons, who had been buried in the ruins. For many days we had smart shocks of earthquakes. On the Saturday and Sunday following the earthquake, I visited Valparaiso: on my way I found the houses at the Viña de la Mar levelled to the ground. On entering Valparaiso, I was astonished at the extent of the ruin, and dismayed at the miserable appearance of the place, as well as at the forlorn and wretched condition of the people. The houses were nearly all unroofed; many had been thrown to the ground, while the thick walls of sun-

dried bricks which remained were split in all directions. The desolation was horrible; the large church of the Almendral, called La Merced, presented the most remarkable ruin. The tower, built of burnt bricks and good mortar, the walls of which, up to the belfry, were six feet thick, were shivered into large blocks, and thrown to the ground. The tower was sixty feet high. The body of the church extended from north to south. The walls at both ends were thrown down, both fell towards the north; the side walls, although much damaged, remained, and supported the ridge roof of timber. The covering of the roof was entirely shaken off, and the whole body of rafters inclined considerably towards the north, and the few roofs of the houses in Valparaise which were not thrown down, all inclined in the same direction. On each side of the church of La Merced were a number of square buttresses of good solid brick-work, six feet square; they stood at a small distance from the walls.

Those on the western side were all thrown down, as were all but two on the eastern side; these two were twisted from the wall in a north-easterly direction, each presenting an angle to the wall.

This twisting towards the NE was remarked in other places. At Quintero, thirty miles to the northward of Valparaiso, the heaviest and largest pieces of furniture in the house there were turned in the same direction.

The whole population of Valparaiso had fled to the hills on which they were encamped. At the further and narrow extremity of the town called the Port, where the houses are built upon the solid rock,

the damage was not not so great as in the other parts of the town.

The governor's house, the two castles, and the churches, being the most substantial buildings, were all shivered to pieces, the destruction being here, as in other places, in proportion to the thickness and solidity of the walls.

It was fortunate that the earthquake did not happen two hours later, as nearly the whole population would then have been buried in the ruins; as it was, about one hundred and fifty people were killed, and many were wounded or bruised.

No bombardment could have produced such complete ruin as the earthquake effected. The desolate condition of the people was lamentable in the extreme, and this was dreadfully increased on the night of the 27th, when, to their surprise and astonishment it rained heavily. If any one thing more than another could add to their wretchedness, it was this unseasonable and unexpected fall of rain.

They who had escaped from the ruin of the town and retired to the hills with such of their property as they could save, were some of them living in tents; the greater number were compelled to bivouac in the open air, and while depending on the continuance of the usual dry weather, the rain which so unexpectedly fell, put them into a state of almost absolute despair. It ceased, however, towards the morning; had it continued for a longer period, not only would it have destroyed their property, but it would have produced famine and disease, the most horrible apprehensions of which filled the minds and wholly occupied the thoughts of the unfortunate and

miserable people. Rain in the month of November had never been known, and its occurrence during the continuance of the earthquakes was considered by the bigotted and ignorant Chilenos, as a mark of the divine vengeance for their own sinful lives, the conduct of the people in power, and the crime of permitting the English heretics to contaminate the country.

The extent of country over which the earthquake was felt, appears to have been very considerable; Copiapo on the north, and Valdivia on the south, were shaken by it, although these towns are 880 miles apart; it was also felt throughout the whole range of the Cordillera, as far as Mendoza, and even as far as Cordova, though here the shock was comparatively weak, and the time of its occurrence an hour later than in Valparaiso. Cordova is upwards of 500 miles east of Valparaiso.

It appears that the centre of the shock was out at sea, somewhat to the southward of Valparaiso, for I could learn nowhere of such violent effects in other parts of the country: the more inland towns, such as Santiago, Aconcagua, and Rancagua, though shaken severely, and much damaged, were not overthrown like Valparaiso and its immediate vicinity. Remarkable as was the extent of this earthquake, it appears to have left no less striking evidences of its force, for all the line of coast of the extent of fifty miles was raised nearly three feet above its former level; in some places the rocks on the shore were raised four feet. All around Quintero, as far as Retoqui point, the fishermen had employed themselves digging shells for lime-making from a stratum

four or five feet thick, in the recesses of the rocks, at the height of fifteen feet above the usual level of the sea, it being evident that at no very distant period this spot must have been buried in the sea, and uplifted probably by convulsions similar to the one now described. This stratum was now again raised at least three feet; the whole coast for many miles may be said to have emerged from the sea.

A luminous meteor, of very considerable size, in apparent dimensions little less than the moon, was observed in the southward, at no very great elevation: it traversed a considerable arch of the heavens, leaving behind it a long train of light, and when it disappeared, it seemed to do so from explosion, as it leaped in the same manner as those which eject meteoric stones, but in this instance no noise was heard to attend its extinction, nor was it known that any stones fell from it: this occurred about half past two o'clock in the morning after the earthquake. At most of the great earthquakes in Chile, a luminous meteor is recorded to have accompanied the phenomenon; and although it does not necessarily follow that the appearance of these aerial visitors are connected with the sources of earthquakes, still it is not by any means certain that these meteors do not originate in some causes connected with the previous convulsive motion of the earth, and probably of the atmosphere also.

Humboldt, in his personal narrative, relates a similar coincidence in the great earthquake at Cumana, and he has collected a number of interesting facts of similar coincidences in similar cases. The collection of these facts, and the peculiar circum-

stances attending them, might tend to throw some light on the origin of meteoric bodies, which still continue to puzzle the ingenuity of philosophers.

I should mention also a fact recorded by a friend, who, when travelling on the night of the 4th of November, about a fortnight preceding the great earthquake, observed at a little past eleven o'clock in the northern sky, a large meteor of great splendour. Boledes, or shooting stars, are to be seen on almost every clear night, but large meteors are rare.

Chile, owing to the extreme dryness of its climate, the regularity and equability of its temperature, its local situation, and other concurrent causes, is a remarkably healthy country: the principal diseases among the natives are of a dyspeptic nature. These are principally produced by the greasy and indigestible food of which the natives eat abundantly. Epidemic diseases are rarely known, and fevers are not of common occurrence, excepting, perhaps, in the heat of summer; one of a malignant nature, called chavalonga, is much dreaded; it seems to be a species of putrid typhoid fever, and generally proves fatal. All fevers, however, of a typhoid character bear alike the name of chavalonga with the natives, who suffer many patients to die for want of proper treatment, under the belief that the complaint is incurable. Rheumatic affections are common among the men, the consequence of their early depravity, by which they contract other local diseases, which are seldom properly cured; the use of mercury is strictly prohibited in all such cases, the chief remedy being sassafras bark, which is produced abundantly in the country: the want of proper cure under such

circumstances lays the foundation for the terrible rheumatisms with which the Chilenos are afflicted. Ague is of rare occurrence, persons affected with it are generally those who have contracted it on the shores of Peru, where it is very prevalent.

In Chile, goitre is but rarely known, though I have observed some instances of it: in Mendoza it is prevalent, but it is singular that in San Juan, a place so near to it, and situated precisely under similar circumstances, the disease is not known; both places are at an equal elevation, both are supplied with water from melting snow, to which influence many have attributed the predisposing cause of the disease. Whenever it does occur, the complaint is generally hereditary. In no part of South America where bronchocele has been seen could I learn of its being combined with cretenism, as is frequently observed in Europe.

The vaccine inoculation is practised in Chile in the large towns, or rather only in Santiago. I had great difficulty in effecting the vaccination of my boys; it was repeated fourteen times before it took effect; the force of the virus appears to be trifling. Inoculation for the small pox is never practised; it would be considered sowing the seed of a general plague: the horror which the people entertain for the small pox is inconceivable; they call it la peste, (the plague). It occasionally occurs in the country parts, but the dread in which it is held prevents any extensive propagation. No sooner is a person discovered to have the peste, be it a man, woman, or child, than the patient is removed to a distance from

any habitation, where a temporary shed is hastily made of a few bushes, and here he is deserted by father, mother, husband, wife, and friend; the house itself is abandoned and set fire to, as well as all clothes suspected to be infected. All those living in the neighbourhood, or who may have approached the patient, proceed to the river, where they bathe themselves, and carefully wash their garments: some elderly person, who has formerly recovered from the disease, is employed to carry food and water to the miserable patient, with whom he is not suffered to come in contact, nor to approach too closely: the food is, indeed, generally left on the ground, at some little distance, so that the patient is obliged to get up and fetch it. In no instance is it customary to seek medical assistance: even the soothing attentions of a friend are never afforded to the unhappy sufferer, who is left to the care of nature, or to die a miserable death from the malignant disease. Many do recover, but this, perhaps, is owing entirely to the poor diet, the cool situation, and fine climate.

Observing in all cases the extreme dread of the small pox entertained by the country people in my neighbourhood, I conceived the notion of introducing among them the practice of vaccination. I experienced much difficulty in procuring good virus, but when I did procure it, I proceeded to inoculate the few persons about me with complete success, and I naturally expected the poor peasantry would crowd to me in numbers, but I was mistaken: it was necessary to visit them at a distance to preserve my virus, until my patience being exhausted, and my

hopes mortified, I gave up my project in despair; the people were actually too listless and too lazy to bring their children to me; but had there happened at that time a case of small pox in the neighbourhood, my hands would have been occupied in attending to new patients as long as the cause of apprehension continued before their eyes.

CHAPTER X.

CHILE DESCRIBED.

Grand Divisions.—Jurisdictions.—First or Northern Jurisdiction, containing the Provinces of I. Copiapo.—II. Coquimbo.—Copper Mines in these Provinces.

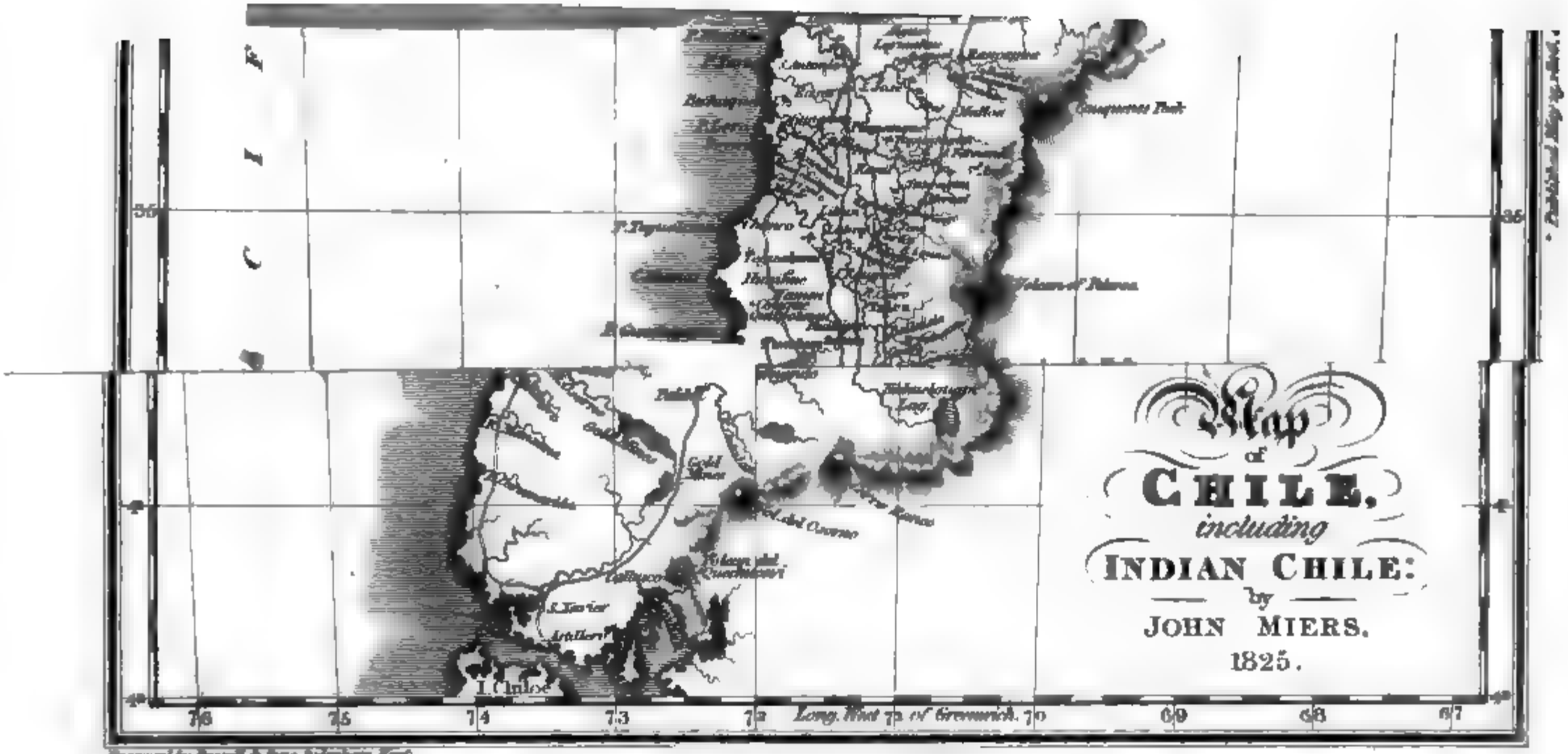
CHILE may be divided into two parts, viz. Chile proper, and Indian Chile, the former being subject to the directoral government of Santiago, the latter possessed by the aboriginal Indians, who may still be said to be an independent race, subject only to their own chiefs, and governed by their own laws and customs. The exact limits of these great divisions have never been accurately fixed, but the river Biobio has generally been considered as the line of demarcation. The Spaniards never were able to retain possession of the country to the southward of the Biobio beyond the line of forts and military positions on the banks of that river.

Chile proper is divided into three great jurisdictions or intendances, viz. In the north Coquimbo; in the middle Santiago; in the south Concepcion: these are again subdivided into thirteen provinces. In the jurisdiction of Coquimbo are the provinces of

I. Copiapo. II. Coquimbo.

In the jurisdiction of Santiago are the provinces of

III. Quillota. IV. Aconcagua. V. Santiago.
VI. Melipilli. VII. Rancagua. VIII. Colchagua.
IX. Maule.


Map
of
CHILE,
including
INDIAN CHILE:
by
JOHN MIERS.
1825.
Long. West 75 of Greenwich. 70
I. Chiloe

In the jurisdiction of Concepcion are the provinces of

X. Chillan. XI. Itata. XII. Rere.
XIII. Puchaquay.

1. COPIAPO.—This province, though the largest in extent, contains the smallest proportion of people, and from its want of resources is likely to remain so. It extends from the Cordillera on the east to the Pacific Ocean on the west, and from the desert of Atacama on the north to the river Guasco on the south; the distance from east to west being about seventy-five miles, and from north to south 250 miles. The country is altogether hilly, barren, and destitute of vegetation, excepting in the few vallies that serve to conduct the water that flows in rivulets from the melting of the snow, which in the winter season falls in very small quantities near the vicinity of the central range of the Cordillera. Neither in this province nor in that of Coquimbo does it ever rain, at least, should it happen once or twice in the winter season, it is looked upon as an event of rare occurrence. From this cause there is not a single stream deserving the name of river; for, notwithstanding we see delineated in the maps the rivers of Salado, Chaco, Juncal, Chiniral, Copiapo, Tortoral, and Guasco, yet with the exception of the small rivers Copiapo and Guasco, they are merely brooks, which are dry during the greatest part of the year. The hilly and barren nature of the province, the sandy coast, the few level spots possessing an extremely saline soil, render it impossible to maintain any but the most scanty population; its only inhabitants are miners, and persons connected with mining operations. Excepting the towns, sea-

ports and the interior villages of Copiapo and Guasco, there can hardly be said to be any settlements, and the inhabitants of these places, as well as of the mines, derive their support wholly from the produce of the more southern provinces, brought here either over land or by water from the general depot at Coquimbo. Such is the inhospitable nature of the country, that not only provisions and clothing, but even water is absolutely necessary to be conveyed from a distance to the mines. From these causes and the scarcity of fuel, the ores from the mines of the interior must necessarily be brought to the port of Copiapo, where the processes of smelting and reduction are carried on. From the difficulty of maintaining mules, and the nature of the roads, the cost of conveying the ore and its reduction frequently exceed the value of the product, and consequently none but the richest ores are ever wrought. In no part of Chile does there exist such numerous and such rich mines as in Copiapo, but owing to these causes they are of little or of no value. In the northern part of the province, in the Chaco Alto, are rich mines of gold and silver, but situated beyond the reach of man: even the Chilenos, who can subsist cheerfully and endure privations without injury, where no European could possibly exist, acknowledge that it is impossible for them ever to procure the treasures with which these mountains abound. The country seems of volcanic origin, for although no active volcano has been observed within human record, we have presumptive evidence that its origin has proceeded from such sources. The interior of the Cordillera, which contains these treasures, are said to be com-

posed of aluminous slates, gypseous rocks, carbonated lime, with extensive veins of crystalline sulphur.

The Chaco Cajo contains very rich mines of copper, but no means can at present be devised for working them, but at an expence and loss of life, which the value of the proceeds can never warrant. There are said to be here also, as well as in other parts of the province, rich ores of lead. In the interior rock-salt is found in abundance, but in situations whence it cannot be profitably extracted; saltpetre is also said to exist. In the district of Atacama, not only nitrate of potash but nitrate of soda has been found, a quantity of which was obtained some years ago by the Spanish government, with a view of manufacturing it into saltpetre for the supply of their gunpowder manufactories in Chile, but the expences were so great that the project was abandoned. The bed of the little rivulet of Copiapo is in many places covered with a saline incrustation, from two to four inches in thickness, consisting principally of the sulphate of soda, muriate of soda, and a small portion of nitre: this is confirmed by a late traveller,* who says, "it looks like snow on the ground; the dust raised by the treading of the horses' feet upon it almost choaked us and made us excessively thirsty, when we hailed the sight of a stream, but alas the water was as salt as brine." Very fine statuary marble is said to abound in this province.

The total population of the province is estimated

* Captain Hall, vol. ii. p. 22.

at 10,000, and this is over-rated. The province is subject to violent earthquakes; the town of Copiapo was twice destroyed within the last few years, not one single house having been left standing. The town has been lately rebuilt, its houses are all of sun-dried bricks, white-washed; it is but a small and poor place, seated in the valley of the rivulet of Copiapo, at the distance of eighteen leagues from the little village of Copiapo, built near the sea-shore at no great distance from the anchorage in the bay.

The harbour of Guasco is small, open to the north; the principal town or village is seated about fifteen miles from the sea, in a pretty little ravine, through which the rivulet of Guasco flows: it is a mere village of very small extent, inhabited by people interested in the produce of the copper mines worked in the hills towards the interior. The country around is the most desert and barren that can be conceived; the hills for many leagues in all directions are covered with sand, totally devoid of vegetation. Even the cactus that enlivens the barrenness of the hills of the province of Coquimbo is here wanting. The little valley of Guasco appears by contrast beautiful, enlivened as it is by the many patches of verdure and the few bushes that derive their nourishment from the scanty supply of water flowing from the Cordillera, towards the sea.

2. COQUIMBO.—The province of Coquimbo, like that of Copiapo, is very mountainous, and extends from the centre of the Cordillera to the sea; and from the river Guasco to the river Chuapa, being

about seventy miles from east to west, and 190 miles from north to south. Its rivers are those of Coquimbo, Limari, and Chuapa; the two former are very inconsiderable streams, the latter alone scarcely deserves the name of river. Its actual flow of water, except during the summer, is extremely small: it is wholly incapable of navigation; first, because of its rapid descent; second, because of its want of sufficient depth; third, because of its rocky and stony bottom, finding its exit towards the sea, by a narrow fissure in the mountain, whence it runs with a considerable fall; the sides are nearly perpendicular; a hanging lasso bridge serves for the passage of loaded mules and travellers, at times when it would be dangerous to ford the river. Its towns are those of Coquimbo and Illapel. The town of Coquimbo is prettily situated upon the southern bank of the river near the mouth: it is watered by a canal brought from the river at a higher level, and distributed by little channels through the houses and the gardens in its vicinity. The town is small, its houses, neatly constructed of sun-dried bricks, are tolerably clean; they are arranged in rectangular squares or quadras; the plaza or public square being at the southern extremity. Here the Governor-Intendant resides: he regulates the affairs of the province, of the custom-house, of justice, and of police. The only trade of the place consists of the export of copper and more precious metals: the imports are, provisions, clothing, and other necessaries for the supply of the inhabitants and of the mines. The ports of Copiapo and

Huasco are auxiliary custom-houses to regulate the exportation of the metals, but no vessel is permitted to enter with foreign commodities into any of the ports of these provinces except Coquimbo, nor can any national boat or vessel trade even to these ports with the produce of the country, or the supply of its mines, except by licence obtained for the voyage from the superior government, which is refused or obtained as the interests of the ministers or authorities may dictate. The town of Guasco is a mere village, containing a very few inhabitants, who are merely agents of those interested in mining, or engaged in furnishing means of subsistence to those who resort hither in the trade of metals, or who deal in produce for the supply of the miners. The harbour of Coquimbo is twelve miles distant from the town. It is a tolerably large bay, well sheltered on the southern and western sides, and quite open towards the north, but as the northerly tempestuous winds do not prevail at Coquimbo, the anchorage is secure at all seasons of the year. There is sufficient depth of water for ships of large burthen, there being nine fathoms 300 yards off the shore, and near three fathoms close in shore. A promontory runs into the sea, a distance of two miles, and forms on the northward the bay of Coquimbo. To the southward of this promontory is another bay of nearly a circular form two miles in diameter. The opening to this bay is by an entrance facing the west three quarters of a mile broad: this cove is called La Herradura, Horseshoe Bay; it possesses a good clay bottom, sixteen fathoms water in the middle, twenty-eight fathoms in the entrance, and five fathoms 250 yards off the

beach: it is, however, rocky on the north and south sides, having a sandy beach only on the eastern coast, which being exposed to the western swell from the opening, does not offer so secure a shelter as the harbour of Coquimbo; the breadth of the promontory between these bays is about two miles. A lofty hill forming a kind of promontory to the southward of the Herradura bay, is called the Cerro de la Gloria, where a copper mine was formerly worked. A few leagues to the NE of the town are some small mines of copper, one of which is called Cerro Verde; but the principal mines are far in the interior nearer to the more central Cordillera. The most productive part of the province is the little valley of Elque, watered by a small stream from the Cordillera, which falls into the river Limari: it lies on the upper road from Illapel to Coquimbo; here are several small farms, where fruit, vegetables, and a small quantity of corn are grown; there are also some vineyards of small extent: the population of the valley does not exceed two hundred.

There is another mining town at the southern extremity of the province called Illapel, or San Rafael, or Cuscus. It is a tolerably neat town, but of inconsiderable extent; it is seated in a narrow valley, watered by a small stream, which falls into the river Chuapa. The distance of Illapel from the mouth of the river Chuapa is eight leagues. It is inhabited principally by persons engaged in the neighbouring mines.

There is another small town or village called Chuapa, seated upon the river Chuapa above its junction with the rivulet of Illapel: distant three

leagues from the latter town: it has very few inhabitants.

The principal mines in this part of the province are copper and gold: the chief mines being situated in the Cuestas or ranges of Combalamba, of Llambangûi, of Huamalata, and of Las Vacas.

The copper prepared at the mines of Illapel for sale is not suffered to be exported from any of the bays upon the bordering coast, nor even to be conveyed in small craft, either to Coquimbo or Valparaiso, but must be carried on the backs of mules to one of these places: Valparaiso at eighty leagues distance is the nearest of the two, and as the road is better than that to Coquimbo, nearly all the copper produced is carried to that port. This is a great discouragement to the working of the mines: other circumstances during the revolution have also militated greatly against the success of mining, so as to cause many who have hitherto employed their capital, to withdraw it and employ it in agricultural occupations. Hence the cultivation of land in the valley of the Chuapa, as well as in the ravines leading into it, has somewhat increased. From the disadvantageous situation of Illapel with respect to the two sea-ports, the increasing demand for labour in Chile, and the consequent rise of wages, greatly enhanced as these will become from the influx of British capital and competition about to be attempted there, we may conclude that before long the mines of Illapel will cease to be worth working. Little indeed can be reasonably expected in the way of profit from any attempts by foreigners to carry on mining operations in Chile. This will be shown

when I come to treat of the mines in this country. Working of mines to advantage must be postponed to a very distant period, when the population has become much more dense, when proper divisions of labour are practised, and such conveniencies have become common as will diminish the cost of labour, of materials, and of transport. A great deal has been said of the immense riches of the mines of this province: their extent, their value, their produce have been the themes of extravagant encomium and of absurd anticipations: no less have sanguine hopes been excited relative to the vast importance they will become to the nation of Chile; but the time is arrived when the real value of these calculations can be estimated, and my motive for alluding to them in this place is simply to show that the province of Coquimbo is not likely to increase in population, in riches, or in importance, as the more southern and more fruitful provinces are sure of doing. No inducements to settlers, no facilities for subsistence are to be found within its range. Were it not for the miserable mining operations carried on in them, these two northern provinces would be a desert.

CHAPTER XI.

CHILE DESCRIBED.

Second or middle Jurisdiction, containing the Provinces of,—III. Quillota.—IV. Aconcagua.—V. Santiago.—VI. Melipilli.—VII. Rancagua.—VIII. Colcagua.—IX. Maule.—Gold, silver, and copper Mines.—City of Santiago.—Port of Valparaiso.—Geological Observations.—Volcanoes.

THE division of the country of Chile into three several provinces is a natural one, each differing in climate, resources, and capabilities. No sooner do we cross the Chuapa and enter the middle jurisdiction than the soil becomes more fertile, the ravines better watered, and greater facilities presented for agriculture.

III. QUILLOTA.—This province extends from the province of Aconcagua on the east, to the ocean on the west, and from the river Chuapa on the north to the province of Melipilli on the south, being a distance from east to west of thirty miles, and from north to south of 120 miles. The only stream in this province deserving the name of river is the Concon, called also the Quillota, the Ocoa, the Aconcagua, according with the names of the places through which it flows. At Aconcagua it receives an auxiliary branch from the river Putaendo, which rises in the Cordillera, northward of the peak of Aconcagua, while the main branch proceeds from that part of the Andes southward of the peak of Aconcagua, and northward of the peak of Tupungato.

There are several esteros, or rivulets, flowing into this river, such as the Limache, the Purrutum, the Longotoma, La Ligua, Quilimari, and Conchali; some of these are merely brooks, which, in the winter season are swelled by the rains, but are dried up in the summer. The streams of Langotomo and La Ligua unite at a point, just before they disembogue into the sea; the former, on approaching the coast, is prevented from flowing into the sea by a range of sand hills that intercept its progress; it therefore runs along the base of these hills in a southerly direction, for two leagues, when it falls into the La Ligua stream: the latter is the smallest of the two streams, and descends more rapidly. The Estero of Conchali, is a still smaller stream; it falls into the sea between Quilimari Bay and the mouth of the river Chuapa. The face of the country is hilly, consisting of one main lateral branch of the Cordillera, proceeding from the Peak of Aconcagua towards the Pacific, partly bounded by the rivers Chuapa and Concon. This chain spreads into several ranges, and these again are divided into more minute ramifications by the many little ravines and hollows that intersect the country.

Many small ravines favourably situated are cultivated according to the manner of the country, and might be cultivated to a greater extent, if the water which comes from the mountains were more judiciously used for the purpose of irrigation. The whole surface, however, susceptible of irrigation is comparatively of small extent. The hills, which form by far the greater portion of the face of the country, are stony, but mostly rounded, presenting surfaces of

hard, red clay, arising principally from the decomposition of the hornblend that enters into the composition of the rocks: these hills are thinly covered with low bushes and stunted trees, numerous quiscos (cactus Peruvianus), and cardones (pourretia coarctata and P. cœralea). The ravines present a few evergreen trees and shrubs. From the nature of the soil and scarcity of rain but little pasture even for cattle is produced.

The country is divided into several large estates, used for breeding and rearing of cattle, but the quantity that can be maintained is very small, and these during a considerable portion of the year are allowed to range over a large extent of country, and subsist only upon dried leaves and bushes.

The formation of this range consists of sienitic granite; that is to say a kind of hornblend enters into its composition, as mica does in common granite, and although in small patches true granite is sometimes found, for the greater part no mica whatever is observable, but the sienite and hornblend sometimes are so abundant as to give to the rock a lamellar or schistose structure.

To the northward of this province there is somewhat less rain than to the southward, where seldom more than fourteen days of rain are known in the year. The parts bordering on the coast are, however, more fertile, possessing what are called tierras de rulo, a name given to a soil that can produce crops of wheat without irrigation; these are mostly stiff clayey soils, upon the gentle slopes of hills where the subsoil is moistened by springs which are so small as never to issue from the surface, nor seem even to

moisten the superficial soil. These tierras de rulo are common near the sea coast, especially about Catapilco, La Ligua, and Puchincavi. This part of the country is designated La Costa, in reference to its locality, and referred to as a corn district of that name. The quantity of corn raised is small.

The principal towns are Valparaiso, Quillota, and Petorca. The largest villages are La Plazilla de Puchincavi, La Plazilla de la Ligua, Ingenio, Limache, and Casa Blanca: its harbours are those of Valparaiso, Quintero, Papuelos, De la Ligua, and Pichidangue.

Valparaiso, being the principal port subject to a separate administration dependant on the government of Santiago, the capital, will be described in another place.

Quillota is a town of considerable note, near twenty miles distant from the sea, and is seated upon the southern side of the river Concon, where the valley widens to a considerable extent. The town is built at the foot of a low hill, which protects it from the effects of inundation, the river running between the hill and the opposite mountain. The town is irregularly built; to each of the houses a garden is attached. It is a long straggling place, the streets being divided at right angles into squares, which, towards the outskirts, consist wholly of gardens, especially those in the Calle Largoe. It has seven miserable churches, and as many miserable convents; the houses are poor, low, and dirty, roofed for the most part with tiles; the walls, which are of considerable thickness, are of sun-dried bricks: the interior of the houses are generally small and dark.

In a population of about eight thousand, there are some twenty-five families who are here considered rich. The annual incomes of these families may be estimated at from 700 to 1000 dollars each, equal to about 140 or 200 pounds sterling. The rent of an ordinary house is from 100 to 150 dollars per annum. The inclosed gardens attached to the houses contain a considerable quantity of fruit trees;—the fruits consist of apples, pears, peaches, nectarines, figs, walnuts, muscatel grapes, strawberries, and melons. The greater portion of these fruits are carried on the backs of mules to the market of Valparaiso, where there is a considerable demand.

The estates of San Pedro, Pachacay, and Rauten, which occupy this part of the valley, produce a great quantity of the vegetables, melons, and water melons which are sent to the market of Valparaiso. In this neighbourhood, hemp of good quality is also grown, this place seems most favourable to its growth. Hemp is worked, dressed, and hackled, in a very rude manner, and both twine and badly laid rope, five-eighths of an inch in diameter, are made for the shipping, without tar, which is too expensive to be used in this inland situation.

The town of Petorca is seated in the valley of Longotoma, at a considerable distance from the sea; it is distant 100 miles from Quillota, 135 miles from Valparaiso, the same from Illapel, fifty miles from La Ligua, and sixty miles from Aconcagua. It is larger than Illapel, but the population does not exceed 800. A subordinate military governor, and the curate of the district, reside here; it

is a poor miserable place, being alone the residence of those engaged in the gold mines in the neighbourhood.

The village of Puchincavi consists only of a few small houses; it is about three miles from the sea-shore, at the distance of forty-two miles north of Valparaiso. The curate of the district resides here. The village of La Plazilla of La Ligua is about thirty miles northward of Puchincavi, seated in a little valley of the La Ligua, not far from the sea, having about 200 inhabitants: its houses, or rather huts, are all of one ground-floor, of mean appearance, some few only being built of sun-burnt bricks; they are extremely shabby and miserable. About three miles higher up the valley is the Plaza de la Ligua, a place of greater importance, as a subordinate military governor resides here, as well as the curate of the district.

Ingenio is another little village, situated between Petorca and Aconcagua, near an estate where the sugar cane was formerly attempted to be cultivated: it grew there, but not in sufficient quantities to establish any manufactory of importance; the consumption being principally of the green shoots, which were taken to Santiago for sale, the people being excessively fond of them.

This branch of industry has been for many years abandoned. Limache is another insignificant village in a valley three miles to the southward of Quillota, from which it is separated by a ridge of hills proceeding from the Campana Peak or Bell of Quillota. It is a small straggling village, having about 200 inhabit-

ants, a chapel, and a number of low miserable houses. It is the residence of the curate of the district.

The village of Casa Blanca is a mean inconsiderable place, built chiefly with sun-dried bricks; some few of the houses are white-washed; its inhabitants are of the meanest class, and do not exceed 400. The village lies on the road between Santiago and Valparaiso, being sixty miles from the former, and thirty from the latter. It is the seat of a subordinate military governor, and the residence of the curate of the district.

There are, about the houses of all the several estates distributed throughout the province, a few huts in which the principal tenants reside, but I cannot call to mind any other instance of an aggregation of houses that can deserve the name of village. The total population of the province of Quillota is estimated at 36,000 souls, which I consider to be the extreme number.

The harbor of Quintero is a snug little circular bay, distant, by land, thirty-three miles from Valparaiso; it is rather open to the north: it was recommended by Lord Cochrane for the naval depôt of Chile, as it might have been defended by land as well as on the sea-side; but the want of resources, and still more the jealousy of the government, prevented the adoption of his recommendation. The harbour is shallow, having from about two fathoms and a half to three fathoms water; but the great earthquake of November, 1822, destroyed the bay by lifting its bottom full four feet. About a dozen fishermen reside here.

The bay of La Ligua, or the Papudos, is open to

the north, and insecure in boisterous weather. A few fishermen reside here.

The bay of Pichidangue, near the estero of Quilimari, is represented as the most secure of any harbor along the coast of Chile; it is however small. This place, under the Spanish regime, was the resort of French, English, and American smuggling vessels, who, in connivance with men in power, came hither and disposed of their cargoes, which were carried into the interior. There was, indeed, no other method of purchasing the cargoes of foreign vessels, as they were strictly interdicted from entering any place along the coast, under severe penalties. The place is celebrated all over the country as the spot where, a few years ago, Captain Burcher, a master of one of these English smuggling ships, called the "Scorpion," was enticed ashore, treacherously murdered, and the vessel seized and plundered. A few fishermen alone reside here.

The principal mines in this province are gold; this metal is distributed in imperceptible particles through portions of the sienite ranges; it is sometimes found in auriferous pyrites. The principal places where the mining operations are carried on are in the ranges of mountains surrounding Petorca, at La Ligua, La Dormida, and some other places: the workings are of different kinds—1st, where the rock is detached by blasting, ground by mills, and the gold separated by amalgamations; 2d, Lavaderos, where a small spring of water is dammed up, and directed over a quantity of decomposed rock, the muddy and sandy particles carried off by the stream

being deposited in certain receptacles, and afterwards separated by mechanical processes.

I never heard of the existence of a considerable silver mine in the province. Copper is wrought in the northern parts of the province, and formerly some mines were worked at La Ligua, but they were abandoned, as the product did not pay the expences of working them. Some few mines have been wrought near Catemu, Purrutun, and other places, but they have seldom been found to repay the expences attendant on the processes of excavating, smelting, and carriage.

The principal cultivatable parts of this province are about the great valley of the river Concon, the several valleys leading into it, as those of Limache, Llaillay, and Purrutun, as well as others of less considerable extent: the situations of the neighbourhood of Quillota, Amasa, Ocoa, Romeral, and Catemu, are beautiful, and the crops there produced most luxuriant, both in grain and garden produce.

4. ACONCAGUA.—This province extends from the central ridge of the Cordillera on the east to the province of Quillota on the west, from the province of Coquimbo on the north to the province of Santiago on the south, being a distance from east to west of about 40 miles, and from north to south of about 110 miles. It possesses a considerable portion of cultivated ground. It is watered by two main branches proceeding from the Cordillera, that of Putaendo proceeding from the north-east, that of Aconcagua proceeding from the south-east; their junction is effected near the town of San Felipe, opposite to the opening of the valley leading to Quil-

lota. The valley of Aconcagua, as it is called, is a beautiful flat portion of ground, of a somewhat oval form; its length from the entrance of the river at the Viscacha bridge, in an ESE direction, to its exit at the Tinaca point, opposite San Felipe, is fifteen miles; its breadth, from the cuesta of Chacabuco to the estero of San Josè, in a N and S direction, is thirteen miles: the valley of Putaendo is smaller, and is separated by a cordon of hills stretching across and contracting the continuity of the two vallies opposite the Tinace point or exit of the river at Panxegua towards Quillota. The province is divided into four districts, Putaendo, San Felipe, Santa Rosa, and Curimon. The whole of this valuable portion of the country is parcelled out in various possessions, some few of considerable extent, but mostly of smaller farms: they are separated by inclosures of rammed earthen walls, and are irrigated by numerous well-directed channels: here are generally cultivated, wheat, maize, beans, pumpkins, melons, and other garden produce. Orchards and vineyards are numerous, and enclosures of Lucerne for the fattening of cattle are abundant. From the smallness of many of the possessions and the division of the ground, the population is pretty well distributed over the surface, but is more dense at the new and the old cities (La Villa Nueva y La Villa Vieja) of Aconcagua. The situation of the latter, San Felipe, has been already described: it is somewhat larger than Quillota, is more regularly built, and has much better houses: the people seem more industrious and cleanly, are evidently richer, and possess greater activity and intelligence. The town

is divided at right angles into regular squares, 150 yards long on each side; there is a public square with a rude piazza on two of its sides, where the governor resides; here are the offices of government, the cabildo, the prison, and the barracks. The houses have all inner courts, and some few have gardens: the town has lately been tolerably well-lighted by night, and furnished with watchmen, who patrol the streets every quarter of an hour: a public walk, shaded by rows of poplar, in the great wide street, which, in most Chileno towns, runs along one of its sides, is called the Cañada, has lately been made: all these improvements have been defrayed by fines upon those who neglected to clean the fronts of their houses, upon those who neglected to keep the bridges in repair over the water-couses: but the innovations and improvements, so much against the spirit of the inhabitants, were only carried into effect by the resolution of a very spirited governor, whose salutary measures at length created so much discontent, as to induce the government to displace him: since his removal the half-finished improvements have not advanced one step. The population of the town may be estimated at about 5,000.

The town of Santa Rosa, or the Villa Nueva, is seated on the margin of the southern bank of the river, at the southern extremity of the valley: it is fifteen miles distant from San Felipe; this town is similarly constructed, and of about an equal extent. It is governed by a separáte military officer, who is subject alone to the government of the metropolis, and by no means dependent on the orders of the chief of San Felipe. Its houses are built with sun-

dried bricks, plastered and white-washed: the windows have iron railings before them, glazed sashes being scarcely known. There are also little gutters of water running through the houses, as well as through the streets, and more attention is paid to health and cleanliness than could be expected from Chilenos: the dry nature of the climate, however, does more for them in these respects than any regulations could effect.

The village of Curimon lies on the southern side of the river, between the two towns, forming an angle with them, as the river, at this part of the valley, tends to the southward. A great many small possessions are here congregated, and the population is of course denser. The houses are very poor and miserable; they are mostly surrounded with gardens. This was originally an Indian village.

The village of Putaendo is somewhat similar to that of Curimon: its situation has already been mentioned.

That part of the province lying between the valley and the central ridge of the Cordillera contains a considerable extent of ground, used for breeding and rearing cattle: during four or five months of the year, one half, or one third portion of this mountainous district is covered with snow, but during the remainder of the season it affords tolerable pasturage; indeed, on some of the table heights, as well as in the ravines, most excellent and abundant pastures are said to exist: these pastures are in perfection when the lucerne grass of the irrigated valley is dried up.

There are some few lavaderos, or watering places,

in this province, the produce of which is small.—There are no mines of silver; a small quantity of very poor copper ore is obtained, which is carried to the estate of Panxegua for reduction, where there is a trapiche and a smelting furnace.

The climate of Aconcagua is very different from that of the coast: the southerly winds which cool the atmosphere in Valparaiso seldom extend to this valley; the temperature is therefore scorching during the day in summer time; I have frequently seen the thermometer above 90° in the shade. The evenings, however, are cool and refreshing, for no sooner has the sun disappeared than a delightful current of air blows from the westward towards the Cordillera: the contrast between the excessive heat of the day, and the cool refreshing temperature of the evening, is delightful: the people of all classes make it a practice to sleep in the open air during the summer nights. Those who have mattrasses merely throw them on the ground in their patios, or inner courts, or before their huts; or such as have no beds, arrange their saddle-cloths in the same manner, to enjoy a most profound sleep. Owing to this difference of temperature, the order of day and night is inverted, for it is customary, even among the poorest laborers, to sleep two hours in the middle of the day, and, among the better classes, to sleep four or five hours: during the night, they only sleep from midnight to break of day, which is about five o'clock.

Vegetation proceeds rapidly; the vineyards yield most luxuriant crops of excellently flavoured grapes. Olives yield abundantly, and were the people more

enterprizing and industrious, an immense produce might be procured from this little district: even, with all the impediments existing against individual enterprize. Aconcagua surpasses the productiveness of any other district, and within the few years that have elapsed since the revolution a much greater superiority is here observable.

The produce from the cultivated parts of Aconcagua and Quillota, when compared with the other barren portions of Chile, is very great, as is the whole produce of Chile, when compared with the arid, sterile, and almost uninhabitable regions of both higher and Lower Peru.

In the winter season, owing to the elevated situation of these vallies, their average height being about 2000 feet above the level of the sea, and to the near proximity of the Cordillera, which at those seasons is entirely covered with snow as far even as the summits of the mountains that skirt the eastern side of the valley, frosts happen here when at the coast they are unknown in the same latitude. Snow frequently falls in the valley at the time when rain only falls along the coast. At this season, in the intervals of fine weather, a genial warmth is shed by the sun's rays diffused through a clear atmosphere, but the nights are cold and frosty. At these times dew falls heavily, and appears as a hoar frost: these fine winter days frequently do much injury to the fruit crops, for the buds and flowers of the fruit trees and vines are forwarded in the day, and frozen in the night: owing to this cause it sometimes happens that the crop of grapes is nearly destroyed, and the fruit is nipped in the bud so as to render it scarce,

where in other more favourable seasons it is most abundant.

5. SANTIAGO.—This province extends from the central ridge of the Cordillera on the east, to the provinces of Quillota and Melipilli on the west, from the province of Aconcagua on the north to the province of Rancagua on the south, from which it is separated by the river Maypo, being a distance from east to west of about forty-five miles, and from north to south of eighty-five miles.

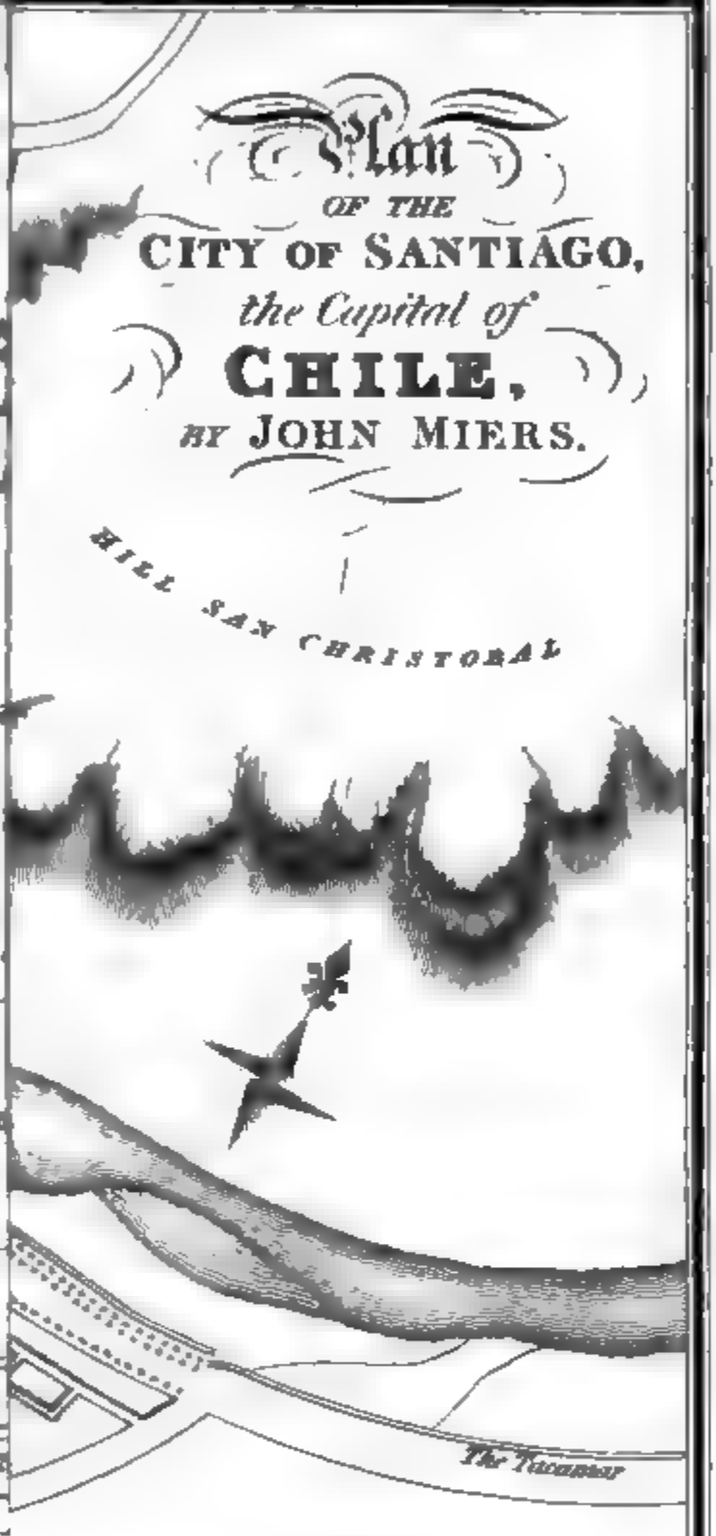
Like the province of Aconcagua, it consists of a considerable portion of table land, placed at the foot of a range of similar Cordillera, but the table land of Santiago is not so extensively tilled as the former, nor is it so capable of cultivation, as the requisite quantity of water cannot be brought upon it for the purpose of irrigation: not one tenth part of these level plains can therefore be cultivated, although within the last few years, since the canal of Maypo has been completed, a far more considerable portion has been appropriated to purposes of agriculture. The parts mostly cultivated are in the valley of the Mapocho, and the immediate neighbourhood of the metropolitan city, where tillage and gardening are carried nearly to their utmost possible extent, as the water of the river Mapocho is wholly expended in purposes of irrigation and the consumption of the city. These plains extend eight leagues toward the river Maypo to the southward of the city, and were incapable of cultivation until a canal had been cut from a point of that river at a higher level than the altitude of Santiago, and conducted along the foot of the Cordillera, to the river Mapocho

above the city. All the intermediate grounds upon the extensive plains of Maypo, at a level below the canal, are susceptible of irrigation, but a large portion at a higher level cannot be irrigated, and cannot therefore be cultivated. Another portion of these plains, twenty miles to the northward of the city, is cultivated and irrigated by a rivulet proceeding from the Cordillera, which, like the Mapocho river, is expended in irrigation. This district is named Colina. To the westward of Colina another strip of land on the opposite side of the valley is brought into cultivation by the water of the rivulet of La Lampa. These are the only streams within the province deserving notice, if we except a number of little brooks which issue from the numerous gorges indented along the margins of the hills which surround the plains. Little patches are here in some few places cultivated, but the streams are so insignificant as to be absorbed before they reach the plains, and in many places the springs are wholly dried up during the greater portion of the year. On the western side of the valley, twelve miles distance from Santiago, is the small lake Podaguel, about half-a-mile long, and 100 yards broad: it is a mere pool, into which the redundant waters from the rivulets Lampa and Colina flow during the rainy season: these rivulets at all other periods, are wholly consumed in irrigation, or absorbed by the arid plains over which they would otherwise flow, but whenever it rains, the redundant water from these sources finds its way into the Podaguel lake, and thence along the western margin of the valley till it falls into the river Maypo. The extent of this lake has been magnified to the length

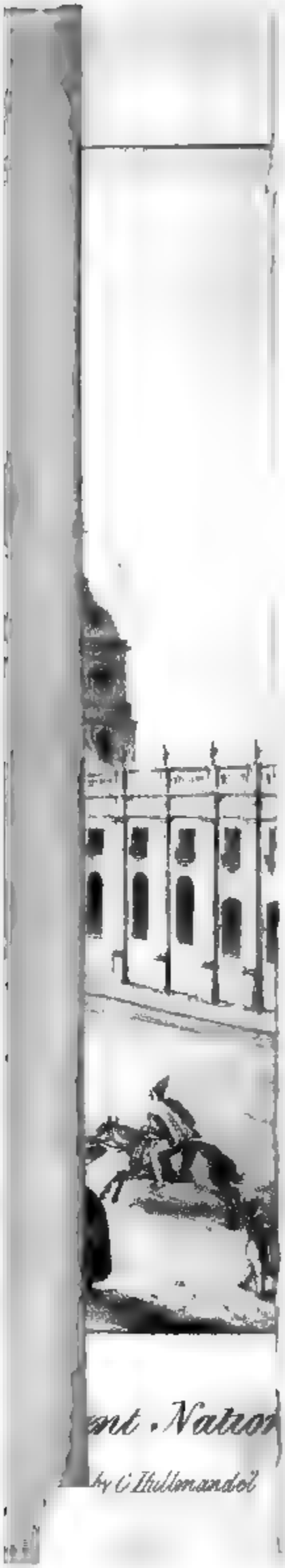
of nine miles, and to the breadth of three miles. The road toward Valparaiso passes along the southern extremity of Podaguel lake, near the exit of its waters, which here forms a stream called the river Podaguel, where, owing to the eddy formed by the waters flowing from Colina into the still water of the lake, fresh holes are frequently made, and beds of mud brought down from the streams are here deposited, to which cause alone is attributable the danger stated to exist in crossing the river, which has been magnified by many to a frightful degree. About three miles from the village of Colina towards the Cordillera are the hot springs called Los Baños de Colina; though very small in size, they are much frequented: the water is somewhat purgative and chalybeate.

SANTIAGO.—This city is, upon the whole, one of the finest cities in South America, in point of structure, convenience, and healthiness, but not so with regard to its geographical situation; it is certainly inferior to Lima and Buenos Ayres in this respect, as well as in the elegance of its public and private buildings; but it surpasses them in cleanliness and regularity, and possesses at first sight a far more imposing appearance than it is found to deserve on a closer examination. It is ninety miles distant from Valparaiso, sixty-six from Santa Rosa, seventy-two from Rancagua, 480 from Conception, and 450 from Coquimbo. Like other Spanish towns, the city is divided into rectangular and equal squares, called quadras, separated by streets, which are forty-two Spanish feet broad; the length of each compartment of buildings being 408 feet, making together a

Plan
OF THE
CITY OF SANTIAGO,
the Capital of
CHILE,
BY JOHN MIERS.



A *Plaza or Great Square*
B *Cabildo and Prison*
C *Directorial Palace*
D *Director's Residence*
E *Estado Mayor*
F *Custom House*
G *Consulado*
H *Theatre*
I *Mint*
K *Baconal or Meat Market*
L *Post Office*
M *Library and Printing Office*
N *Barracks Guard of Honor*
O *Intendencia*



quadra, which is a measure of 150 varas or Spanish yards. The town is tolerably level, or rather it is built on a very gentle slope, hardly perceptible, towards the west; and, as the principal streets tend W forty-one degrees N, true bearing, or W twenty-four degrees N by the magnetic bearing, this arrangement affords the advantage of its being irrigated in both parallels of its rectangular position. The streets are all paved with small rounded stones brought from the bed of the river, having a gutter left in the middle, through which a current of water flowing from the river Mapocho, is suffered to run during two hours of the day, by which means a great part of the dirt thrown in front of the houses is carried away by those who feel a pride in preserving a cleanly way before their residences. There are several distinct underground gutters or sewers, through which water is continually flowing, and traversing the city in a westerly direction; two of these run through each line of quadras, one for each line of houses facing the principal streets, by these the greater portion of the filth and ordure of the houses is at once carried off from the town; but it is lamentable to observe, amidst such advantages, the disgusting filthiness of the people, as it is impossible to pass through the outermost streets, or even the cross streets in the centre of the town without meeting with the most offensive exhibitions: at one time the ordinances of the police were strictly enforced and more decency was observed; but since they have been forgotten the people have relapsed into their former habits. Most of the streets are paved on one side with wrought slabs of red porphyry

quarried from the neighbouring hill of San Christobal, the breadth of the pavement being nine feet. The south-east extremity of the town is separated from the suburb of the Cañadilla by a grand highway called La Cañada, which is 150 feet wide. At the eastern angle of the town is the hill and fort of Santa Lucia, beyond which the Canada begins about the middle of the Tacamar. The river Mapocho runs past the town, on its westerly and northerly sides, which separates it from the suburb of the Chimba: communication is facilitated by a road leading to a tolerably handsome bridge of bricks; after crossing the stream it is divided into two roads, the easternmost leading to the most populous portion of the Chimba, the other to the least populous portion, and becomes the high road to Aconcagua. At the south-western angle of the town, at the end of the Cañada, is another suburb called Chuchunco. The town itself consists of nine principal streets; there are twelve other streets running transversely from the Cañada to the river; so that there are above one hundred and ten quadras, or compartments of houses comprised within the actual limits of the city. The suburb of the Cañadilla occupies two-thirds of the same space, while the suburbs of the Chimba and Chuchunco together are about the same extent as the Cañadilla.

The Plaza, or great square, stands nearly in the middle of the city: it occupies a space of a whole quadra. The buildings on the NW side are the directorial mansion, the palace of government, the prison, and chamber of justice. On the south-west side

stand the cathedral and the old palace of the bishop, now occupied by the Estado Mayor; on the south-east side are a number of little shops, under a heavy looking piazza, while the story above is divided into private dwellings and gambling houses: the north-eastern side is wholly occupied by private residences, among which is the English hotel.

The Palace is a handsome capacious building of two stories, arranged round a large quadrangle; the lower range contains the armoury, treasury, and some other public offices; the upper story contains the great hall of audience, the offices of the ministers of state, war, and finance, and tribunal of accounts. The Directorial residence is on the ground floor, it consists of a handsome suite of rooms, well furnished. The presideo is a building of two stories, the lower being occupied as a prison; the upper contains the offices and halls of the court of justice, and of the municipal corporation, or cabildo. These edifices are built in the ordinary bad style of Moorish architecture. The palace is by far the best specimen of architecture, and is the most imposing. All these buildings are of brick, plastered and whitewashed, the pedestals of the pilasters alone being of red porphyry.

The Cathedral is the only stone building in the city, its front was never half finished, but, judging from the wing that is completed, the design must have been of the better order of Moorish architecture; it is ornamental, but heavy: it is built of a kind of limestone quarried from the hill of San Domingo, in the Chimba suburb: notwithstanding

the genial climate, the stone is fast shivering to decay, though it is quite a new structure. The bishop's palace is a heavy decayed building; and the houses before alluded to, with the piazzas, are so dilapidated from age, that apprehensions are entertained that they will fall or be overthrown by every earthquake that happens. In the centre of the square is an ornamental fountain of brass, furnished with water by a subterraneous aqueduct immediately from the river. The town is chiefly supplied with water carried hence for sale, in barrels of ten gallons, two of which are a mule's load: it is sold at a medio, or three pence the barrel.

The Consulado is a spacious building: it stands in front of the Jesuit's church, is built of brick, plastered, and white-washed. Here the Consulado, or commercial tribunal, meets, and the senate and the national congress also hold their sittings. On one side of a small space in front of the Consulado is the theatre, which is externally a miserable building: on the other side is the custom-house, a large and very capacious building, the lower story being occupied as custom-house warehouses, the upper story by the custom-house and other public offices. The Mint is the largest building in the city; it occupies a whole quadra, and is situated in the cañada, its front facing a shabby street. It consists of three quadrangular courts, round which the offices and salas are arranged. The façade in front consists of a series of heavy pilasters, surmounted with a rude cornice, having above it a long ponderous ballustrade of bad workmanship: in the centre is a large arched portico, or entrance gate,

with massive pillars close to the wall on each side, supporting nothing; the whole is of plain brick, and presents a very paltry appearance. In the centre of each side of the front quadrangle, whence the principal entrance doors and passages lead to the other parts of the building, are two lofty massive pillars, projecting some distance from the door-ways, and supported upon tall thin pediments; they have nothing above them but a piece of cornice, of no greater width than their diameters, which cornices form a projecting extension of the architrave of the door-way. It is a very ugly and heavy structure, yet the Chilenos point out the mint as the great ornament and boast of their city, fancying there does not exist in the world any building equal to it. A foreigner who visits America, if he wish to keep on good terms with the natives, must forget all he has left behind him in Europe, and bring his taste to a level with that of the Creoles: compared, therefore, with the present skill of the Chilenos, the mint is a master-piece of bricklayer's work among a people used to build with scarcely any other materials than irregularly shaped sun-dried bricks, cemented together with mud. The mint, as well as the other public buildings, were constructed by bricklayers sent out from Spain for the express purpose. The brick-work of the house is good, but the design and arrangement are as bad as can be well conceived. The town and suburbs are divided into five parishes. The canadilla belonging to Saint Isidore, one division of the city and chuchunco forming the parish of St. Ann; another portion of the city belongs to St. Paul; the western chimba forms that of Estampa;

the eastern chimba, St. Francis. All the parish churches are mean structures, but those of the convents present some of the best buildings in the city: that of San Domingo, in the street of that name; that of the Jesuits, which is remarkable for its curiously formed painted exterior; its tower is constructed altogether of timber, the better to resist the shocks of earthquakes, which have frequently overturned the steeples of the churches. Attached to the churches are five convents, viz.—

Two Jesuits, Campania, now used as a national college,
Universidad—the public library and printing-office.
Three Franciscans, San Diego, in the Cañada,
San Francisco, do.
Recoletos Franciscanos, Chimba.

There are also five monasteries, viz.—

Two Dominican,	San Domingo,	Calle San Domingo,
	Recoletos,	Chimba.
One White Frairs,	La Merced,	Calle de la Merced.
One Augustin,	San Augustin,	Calle San Augustin.
One ———	San Juan de Dios,	Canada.

The nunneries are nine in number—

Two Carmelites,	Carmen Alto,	Cañada,
	Carmen Bajo,	Chimba,
Two Augustin,	San Augustin,	Calle San Augustin
Two Capuchin,	San Miguel,	Calle de la Capuchinas,
	Do.	Cañada.
Two Poor Clares, both lately united in Convent		
	Sa Clara,	Cañada,
One	Santa Rosa,	Calle Capuchinas.

Besides these, there are four auxiliary chapels:—
San Miguel, in Chucunco.
San Francisco de Borja, in the Cañada attached to a hospital.
Caridad, Calle del Estado, where the funeral service is performed for those bodies carried to the Campo Santo, without the city.
Colegio del Carmen, a religious house of exercise in the Cañada.

There are three markets in the city; the principal one is in the Bassoral, a large square at the foot of the bridge: it is tolerably well supplied with meat and vegetables: the others are moveable stands at each end of the cañada; but meat, vegetables, fruits, and other requisites, are hawked about the streets on horses or mules, which prevents the necessity of sending to the markets. Grass for horses is supplied in the same way; the quantity of lucerne daily brought into the town is very great, as horses are kept in every house. This grass is supplied from the irrigated ground in the neighbourhood regularly throughout the year. Hay is not made in any part of the country. In some cases horses are maintained by chaff and barley. Oats are not grown in Chile.

The houses generally are very large, or at least they stand upon much ground, usually occupying one-third of each front of the principal streets, and one-half of the depth of the cross streets, so that each quadra contains six houses: the rooms are arranged around three quadrangles, or patios; the principal one, which is paved, being in front, is separated from the second, which is generally

laid out with flowers, by the large sala and dormitorio; the third is used for domestic purposes: the entrance to the front patio is through a lofty and wide archway, closed at night by a pair of large folding-gates, which are always open during the day: the houses are thus open to all the world, as the sala door is never closed, and the family, at the usual hours, is always in readiness to receive visitors.

The windows of the rooms looking into the front patio, more especially the large windows of the sala, are protected by handsome fancifully wrought rejas, or iron gratings, which are sometimes gilt; all have wooden shutters to keep out air and light; and some also have glass folding-sashes, framed in tin, but they are seldom to be seen in any other than the sala windows; generally there are no windows in any other rooms, the door alone admitting light through a little grated shutter, which is hinged in one of the upper panels; and in all cases the doors are folding, and fastened, when closed, by a rude huge lock.

The front, looking into the street, is divided off into small rooms, let out as shops; and it is usual to see on each side of the gateway of a large handsome dwelling, a shoemaker, in one of these holes, at work with his dirty family crawling about, his wife cooking their mess upon the floor, the whole exhibiting a picture of the greatest misery and filth; or a pulperia, or chandler's shop.

The outer rooms round the long side of the corner houses are also leased out into little shops, or dwelling-rooms to poor people: in the centre of the town some of these rooms are occupied by small drapers

and other classes of retailers, who have no opportunity for displaying their goods but upon shelves—generally a counter is stretched across the room upon which customers are served as they stand close to the door-way, by which alone light is admitted into the room: the shop-doors are therefore always left open during the usual hours of business, but from one o'clock in the day till six o'clock in the evening, every shop is closed. They are secured by a common lock, as well as by a huge external padlock, while the shop-keeper goes home to enjoy his dinner and his siesta; they are again opened at sunset, and not closed till eleven at night, when they are again secured in the same way; the shop-keeper then goes to a coffee-house, or to his family, where he takes his supper, and enjoys himself till two in the morning, when he sleeps till break of day. In another place I have explained the cause, since the revolution, of an entirely new race of shop-keepers; their numbers are daily increasing, and we now see the proprietors of the large houses fitting up the outer rooms in a manner better suited to this increasing and more respectable class of tradesmen.

In the eastern angle of the town is the hill of Santa Lucia, where a fortress and barracks were built by the Spaniards to command the town, not from external attack, as the fort could easily be silenced from artillery placed upon adjoining hills, but evidently to subdue insurrection in the town: from this place there is a commanding and beautiful view of the city and its neighbourhood. For the distance of a mile and a half above the bridge, and

following the course of the river's southern bank, is a solid brick wall, called the Tacamar, six feet in breadth, and ten feet above the surrounding ground, paved on the top with small pebbles, and furnished on the side next the river with a parapet wall, three feet high: this wall has, at intervals, divisions, with sloping enbankments between, to allow the passage of horses across it: at frequent intervals there are steps made for the convenience of ascending or descending. The Tacamar is a favourite place of promenade. The parapet wall was constructed as a dam to protect the town from the effects of inundation, to which it was before subject whenever the river swelled from unusually heavy rains. Between the town and the Tacamar is a broad mall, planted on each side with tall willow trees of very straight growth. At two points of this walk or ride are two small circular reservoirs, having jets d'eau in the centre, which are seldom kept in repair. Between the trees are brick seats for the accommodation of pedestrians, who resort here to witness the cavalcade of persons mounted on horseback, or seated in calisas, who frequent this ride as a lounge upon feast-days and holidays. The worthy Ex-director O'Higgins, when in office, projected and commenced a new walk and promenade nearly the whole length of the great cañada. Three broad parallel walks, neatly levelled, are formed between four rows of poplar trees planted by him, leaving on the outsides sufficient room for a carriage way: the poplar rows are irrigated by four neat brick channels, through which currents of water flow perpetually: in the middle of the walk a circular area is formed where a jet d'eau is intended to be

placed, a subterraneous channel having been made for the purpose: in another two years time, when the poplars attain their full growth, this will be one of the finest promenades in South America: in its present unfinished state it is the daily lounge of the better classes of people. On the outskirts of the town many of the first families have handsome quintas: there are also extensive vineyards and orchards, enclosed by earthen walls. The vineyards and orchards yield a very considerable revenue to the proprietors. The gardens are sometimes laid out in an ornamental style, with brick-work borders and paved footways; but whenever flowers are planted in the beds, they are half-hidden by the weeds, which are suffered to grow up among them, and which commonly grow over the paths—so little care or interest do even the best of people feel in horticultural pleasures, or in any amusement that shows a refinement of taste. I visited most of the best quintas in the vicinity of Santiago, and found it universally the case, with only one exception; this was in the garden of the Canonigo Herrera, a clergyman of rank, and of comparative good taste and learning, who had spent many years in Europe.

The valley of the Mapocho is well cultivated to the distance of several leagues up the river; here are many quintas, vineyards, and farms, of considerable value: this was originally an Indian settlement previous to the selection of the spot for the scite of the intended capital by Pedro Valdivia, in 1541. To the northward of the city beyond the Chimba suburb is a large hill, called Serro de San Christobal, connected by a road with one of the more dis-

taint ranges of low mountains. A large canal was brought by the Indians from a higher level along the sides of the hill, so as to flow over the summit of the bank behind San Christobal; whence the descent is very rapid into the small plain behind it: the water dashes in a cascade over a rocky corner of the hollow, and flows thence to irrigate the lands which lie between it and Renca; while another portion is carried along the face of the hills to a very distant hacienda, in the direction of Colina.

The cascade just described is called El Salto de Agua; there is a farm attached to it, which is the frequent resort of small parties who ride out here for diversion. At the distance of a league to the westward of the town is the little village of Renca, where there are many gardens: it is watered by the now almost exhausted Mapocho; the intermediate grounds, as well as those within two leagues around the city being cultivated, they consume in irrigation nearly all the water of the river Mapocho. The approaches to the city, in all directions, are through lanes formed by the walled enclosures of the numerous gardens and orchards that surround it.

The enclosures round the village of Colina are partly made of rammed earthen walls and partly of dry bushes of the thorny branches of the algarrobo, a variety of the carob tree, and espino, a species of mimosa, both which trees grow in such parts of the plains as cannot be irrigated, and are the only trees that are to be seen in similar situations. It is to be remarked that the evergreen trees seen near the coast are here only to be found in the ravines, where water enough exudes from the earth about their

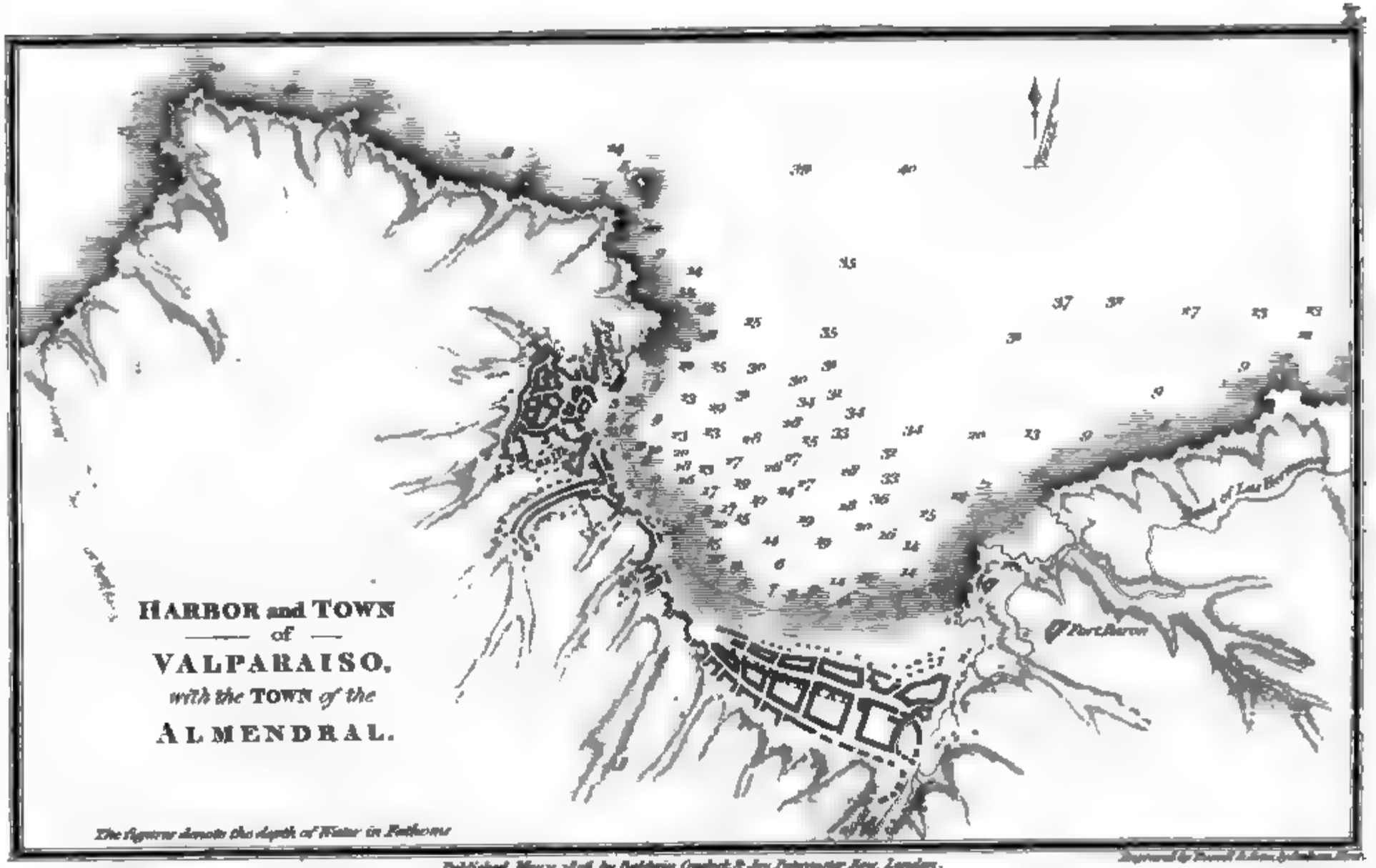
roots to afford them sufficient nutriment; in this latitude the algarroba is never met with near the coast, and in cases where it is seen midway, it is of very stunted growth. The mimosa, however, is met with along the coast, though not so abundantly as in the table lands, at an elevation of about 2000 feet above the level of the sea.

Besides the places already mentioned, the only villages existing in the province are those of Tiltil and La Lampa, which are both very small, inhabited principally by those who used formerly to be engaged in the mining operations, not now worth working.

There are many gold mines in the province of Santiago, in various ravines up the sources of the river Mapocho; but the most remarkable are those of the Dehesa valley, towards the sources of the rivulet of Colino, particularly that of Pildeha, but all of them are small and little wrought. There are other small mines and lavaderos at the Marquesas, Tiltil, Durazno, and La Lampa, in the neighbourhood of the rivulet bearing that name. The silver mines are but few; those of Runghio are the principal, situated in the range of mountains between Tiltil and Chacabuco. Upon the estate of the White Friars, up the valley of the Mapocho, called San Pedro Nolasco, there was said to be formerly a rich mine of silver, which now, from being inundated, is abandoned. There is so little dependance to be placed upon the accounts of Chilenos, that whatever is stated by them should be received with every possible caution. I was shown by a hacendado of the first rank in point of family and opulence, some specimens which he said had come from San Pedro

Nolasco. If his report be credited, this must be a rich mine of the muriate of silver, or hornsilver ore.

VALPARAISO.—This, the principal port of Chile, is seated at the foot of a mountainous range, which here forms a semicircular bay, open to the north, and protected by lofty hills on the west, south, and east. It may be said to consist of but one street, and that only built on one side, for in many places there is only room enough between the precipitous rocks and the beach, to admit shallow houses to be built, and of a very narrow cart-way in front next the sea. In the quebradas or ravines falling into the bay, the houses are built irregularly on each side; in many places the slopes of the hills being studded with solitary huts built upon little terraces excavated out of the mountain, the only access to which is by a narrow winding foot-path. The exit of the ravine of San Francisco, however, presents a small opening on a steeply inclined plane, where a number of mean ill-constructed houses are huddled together in a strange manner, having in front a small triangular place called the plaza, where the market is held, which admits only of a single row of stands on each side, with barely room enough between for a cart to pass. Ascending a little higher, is another small court or square in front of a low mean chapel built of mud, by some called the cathedral, by others le matriz, the head church; above which, in this short ravine, are the Dominican and the Franciscan chapels, huddled in between a number of very mean small houses, separated by irregularly formed lanes. A little to the northward of


HARBOR and TOWN
of
VALPARAISO,
with the TOWN of the
ALMENDRAL.
The figures denote the depth of Water in Fathoms
Published May 25 1818, by Baldwin, Cradock, & Joy, Paternoster Row, London.

this, on the point which forms the western termination of the bay, is the castle of San Antonio, a fort built by excavating the rock, and forming a platform surrounded by an elevated breastwork, mounting thirteen pieces of iron ordnance, which command the anchorage. The point of the hill on the eastern side of the plaza is excavated to form the old castle, where the governor resided before the great earthquake in 1822 overthrew the building and works, which still remain in ruins. This was formerly a larger fortification, irregularly constructed, winding up the steep side of the hill, having below a rampart mounting a dozen pieces of ordnance, and on the summit a citadel likewise fortified and walled in: as a place of defence, it was, however, of little use on the land side, being commanded by the hills, and for this reason it has not been repaired since the earthquake; it is built on the point lying between the ravines San Augustine and San Francisco: between the castle of San Antonio and the plaza are a number of low buildings and sheds, occupied by the government carpenters, and stored with materials for repairing ships and boats; this place is honored by the title of arsenal. Between the fort and the quebrada San Augustin are the best shops, which are low miserable edifices; on the sea-side, and encroaching on the sea-beach, three new houses, with upper stories, have been built since the earthquake: these are the most respectable edifices in the town; two out of the three have been built by English capitalists and English workmen. In other parts of the town several new houses of two or three stories have

as the pull of the anchor is against a steep hill, the danger is not great. Ships whose anchors are too light have driven toward shore in a gale; till within a hundred yards of the beach they have held, and have been partly kept back by the reaction of the surf, and partly on account of the wind falling light on approaching the contiguous perpendicular rocks; a remarkable instance of this occurred in the San Martin man-of-war, in the Chilena navy, formerly the Cumberland East Indiaman, which escaped shipwreck under these circumstances. At such times the securest shelter is that part called the Fisherman's Bay, lying between the castle and Fort St. Antonio, where, close to a clear shingle beach, there is nine fathom water. The beach from the castle to the Cruz de los Reyes is sandy; about midway are the custom-house warehouses, and the landing-place. Here, 100 yards off the shore, in five fathoms water, which suddenly deepens to ten and twenty fathoms, at the distance of 300 yards, is the centre of the bay. It is customary therefore for smaller vessels to carry out an anchor to the northward, and moor the ship with her stern ashore by another cable to a secure mooring upon the beach; the landing of goods and reloading of a cargo are thus greatly facilitated. There are generally a considerable number of vessels in the bay, two-thirds of which are British. There are no facilities for landing goods, there being no mole, but the launches are brought stern forward on shore when they are secured by mooring, and each package is lifted out, and placed on the shoulders of peons, who thus convey it on shore. These men, frequently, on

finding the loads heavier than they expect, or sometimes from mere wantonness, let fall valuable packages into the surf. Close to the beach, at the landing-place, is the office of the resguardo, or custom-house land-waiters. The landing in boats is at all times practicable, even when the wind blows fresh: in the worst weather a landing can be effected at the Fisherman's Bay.

The situation of Valparaiso as the central depôt for the resources of Chile, where supplies can alone be procured by ships, and whence also provisions and other necessaries are obtained for the supply of Peru, induces the commanders of vessels of all nations either trading along the shores of the Pacific, or whaling in these seas, to anchor here. The supply of these ships, and of foreign vessels of war during their stay in the Pacific, as well as the supplies requisite for the long homeward passages, secures a trade of considerable importance to Valparaiso: but whenever the internal affairs of the country shall be regulated, when public confidence and individual security of property shall be found in the southern provinces of Chile, Concepcion will become the chief port of this coast in preference to Valparaiso, as it offers many and greater advantages, and is capable of producing the requisite supplies at a much cheaper rate than they can be obtained at Valparaiso.

The population of Valparaiso has been greatly exaggerated: when I arrived there it was said to contain 10,000 souls, and is now reported to contain 15,000, of whom 3000 at least are Englishmen; but this, like all reports of Spanish origin, is an exagge-

ration. Valparaiso cannot contain above 5000, or at most 6000 persons, and certainly not more than four hundred Englishmen, and this number includes the masters and supercargoes of vessels, and naval officers who are continually coming and going. But by far the greater portion of this number consists of sailors, or persons in the lowest sphere of life, thus reducing the actual respectable residents to a very small number. Of the native population even the better sort are very inferior to those of Santiago; indeed, so low is the society considered among the Chilenos, that there are not here more than half-a-dozen families with whom the more respectable people of Santiago will associate. The few English families residing here associate wholly among themselves. Like all sea-port towns there exists much low life and debauchery; and the place, from one end to the other, even into the recesses of the ravines and concealed hollows, is filled with pulperias, or grog shops, where ardent spirits are copiously consumed, and much depravity results therefrom.

There are two tolerable English taverns in Valparaiso; also two coffee-houses, one kept by an Englishman, the other by a Frenchman. The state of education is at the lowest possible ebb; there is here and there a small reading school, but by far the greater portion of the population can neither read nor write, and this extends even to many of the decent shopkeepers.

During the administration of the government by General O'Higgins, a Mr. Thompson, a useful and

active agent of the "British and Foreign School Society," was permitted to attempt the establishment of a public school, on the Lancasterian plan: the government afforded the requisite assistance, and the convent of San Juan de Dios was appropriated to the purpose, but no sooner had Mr. Thompson left the country than it shared the fate of that which he had established in Santiago, the clergy immediately procuring its abolition. The foreign trade is almost exclusively in the hands of Englishmen, who, with two or three exceptions, are merely commissioned agents. The British commerce to Chile does not consist of regular transmissions, for supplying the markets with British goods; but for the most part of petty consignments of small manufactures and other adventures sent at random.

It is the custom of the mercantile houses in England to advance to the manufacturer one half of the amount of his invoice on goods entrusted to their consignment, and these houses employ the resident agents at Valparaiso to dispose of these lots. In most cases it happens that there is considerable loss, but both the agent and merchant are secure of their commissions, and the deficiency falls upon the adventurer. The mercantile trade to South America has thus been a gaining trade to the consignees at home, no less than to their agents abroad. The profits made by these agents who settled in Chile soon after the revolution were very great, and they affected a style of living far beyond what the trade was subsequently found to justify. Most of these persons kept a counting-house and a few clerks in

Valparaiso to attend to the landing of goods, the passing of which through the custom-house was chiefly transacted in Santiago, a distance of ninety miles from the port. Circumstances have changed the face of trade: a separate custom-house establishment has been formed in Valparaiso; a greater competition of English agency has arisen; the trade is more divided, and the principals who have been compelled to give up their great establishments in the city, now mostly live in humble circumstances in Valparaiso. The warehouses that used formerly to be devoted solely to the storage of wheat are filled with European goods with which the market is overstocked; were the export of wheat again to be called for, warehouses could not be found for their reception, as the storage of foreign goods affords much greater profit.

Here is a military governor, who is also port admiral and commander of the arsenal; his authority is almost absolute; he is the only judge in civil and criminal cases, but an appeal lies to the superior tribunals of Santiago: the governor is assisted by an asesor, or legal adviser, who makes a considerable traffic in the disposal of his office. The municipal regulations are managed by a cabildo, or corporation composed of a few individuals, at all times under the influence of the governor.

Every body who arrives here is disappointed, having been misled by the exaggerated accounts given of this place, which has been absurdly named Val Paradiso, the Vale of Paradise, with its Almendral, or almond grove, although no almonds ever grew here. A stranger finds none of the beautiful trees,

rich foliage, superb edifices, delightful walks and rides, which have been painted to his fancy, he finds it to consist of a few miserable houses, built irregularly on the margin of a steep hollow basin, formed by a semicircular ridge of hills, which rises 1200 feet above its level: the inclined sides of this basin are cut into numerous deep furrows, or quebradas, by the action of the rains, the red clay which has been washed down, forming the surface. The environs are only partially covered with low bushes, mostly of maraviglia helianthus thurifer, a perennial shrubby variety of the sun-flower, the lobilia jupa, and a few other shrubs: the aspect, therefore, of the town and bay to a new comer is the most dreary that can be conceived; in a short time the place becomes nearly intolerable, since, independent of the want of society, there exists no public amusement, no theatre, commercial reading, or new's room; no parade, not even a single spot to walk on, except up the fatiguingly steep hills, or in the narrow dirty streets, where, in consequence of the continually violent south winds the dust and sand are raised in clouds, to the great annoyance of passengers. The neighbourhood presents not a single horse ride, nor is there any retirement or exit from the town, but over the barren steep hills, which renders the attempt at exercise more a toil than a pleasure. In short, in spite of its matchless and beautiful climate, its most agreeable temperature throughout the year, I do not know, in all Chile, a spot presenting a more uncomfortable and cheerless place of residence for a being of sense and feeling than Valparaiso.

6. MELIPILLA.—This is a very small province,

extending from the province of Santiago on the east to the ocean on the west, from the province of Quillota on the north to the province of Rancagua on the south, from which it is separated by the river Maypo, being a distance from east to west of about thirty miles, and from north to south of twenty-eight miles. It has no stream deserving the name of river, though that of Poanguy is so designated: this rivulet takes its rise in the angle which unites the cuesta of Prado with that of Zapata, flows through the plains of Curucabi and Poanguy, which it partially irrigates, until it is almost wholly lost in the sandy plains of Poanguy, when flooded by the rains in the winter season it runs into the Maypo at some distance above the town of Melipilli. At the eastern extremity of the province is the streamlet of San Francisco del Monte, which flows from a ravine in the southern termination of the Prado range, which is erroneously though universally believed by the Chilenos to proceed from the lake Podaguel by a subterraneous natural tunnel under the cuesta. The chief town Melipilli or San Josè de Logrono, is seated about the middle of the district in the vicinity of the river Maypo: it is a very small town, in a very retired situation, being completely out of the ordinary road of traffic: its buildings are low and small, having gardens attached to them; the houses are built in rectangular quadras, with a central plaza or public square, a parish church, and two convents: the population is extremely small. The bishop of Santiago, the only bishop in Chile, has since the revolution resided here upon his farm, in a state of political banishment; his ecclesiastical functions

being managed by a commission entrusted to the charge of a secular clergyman, named Cicufuego, who was a mere creature of the reigning authorities: notwithstanding the bishop was a staunch royalist, it was thought prudent to permit him to remain in Chile under surveillance, so as not to offend too much the violent religious prejudices of the Chilenos, and that the ordination of priests should not be prevented by his absence. On the revolution under General Freyre, the bishop was recalled to the exercise of his functions in Santiago, but his principles were so resolutely opposed to the existing order of affairs, that he was again banished to Melipilli, where he now resides.

San Francisco del Monte is a little village upon the road from Santiago to Melipilli, eleven leagues from the former, and eight from the latter: it is a very small village, prettily situated, having in its neighbourhood several fine estates belonging to families resident in Santiago. The Franciscan fraternity have also a fine estate in this neighbourhood, and a convent in the village, from which it takes its name. Near the mouth of the Maypo, a little to the northward is a small inlet, where there are several huts, inhabited wholly by fishermen, who carry their fish for sale by mule conveyance to Santiago. The harbour and village bear the name of San Antonio. On the plain of Poanguy, and in the neighbourhood of Melipilli wheat is grown; there are also some vineyards where wine and brandy are annually made. The little village of Curucabi has already been mentioned in the description of the road between Valparaiso and the capital. High up

the ravine, about the sources of the rivulet Peuinguy, are several gold lavaderos, and a few very poor gold mines now deserted.

7. RANCAGUA.—The province of Rancagua extends from the central Cordillera on the east to the Pacific Ocean on the west, from the river Maypo on the north to the river Cochapoal on the south, which separates it from the province of Colchagua, being a distance from east to west of about eighty-five miles, and from north to south of forty-five miles. The river Maypo, which bounds the northern limits of this province, rises in the Cordillera, and is principally formed by many tributary streams flowing from the melting snow which falls upon the western side of the Andes to the southward of the Peak of Tupungato. The river Cachapoal, bounding the southern limits of the province, rises also in the Cordillera, and flows from that part of the Andes, to the southward of the sources of the river Maypo. Besides the two chief rivers which water its boundaries, several of the rivulets which rise in this province fall into the rivers Maypo and Cachapoal, while others make their way to the sea. In this province are the noted lakes of Aculeu and Bucalemu; the scenery round the lake Aculeu is beautiful: this, which is a fresh water lake, abounds with fish, swans, flamingos, and other aquatic fowl. The lakes of Bucalemu are formed by the overflowing of the sea during the tempestuous winter, and being evaporated by the solar heat in summer produces a quantity of fine grained salt, which constitutes a considerable article of commerce and revenue to the owners of the two estates of Bucalemu and

San Domingo; the former lying on the south, and the latter on the north side of the lake.

The gold mines of Alguë were formerly very considerable; they are in a mountainous ridge lying between the village of that name and lake Aculeu. Lavaderos are said to be numerous in this province.

The geological construction of the Cordillera, as well as the ranges lying between Rancagua and the sea, are of a similar character to that already described in the latitude of the metropolis; but towards the sea-coast, between the mouth of the river Maypo and Bucalemu, a very different formation prevails: the hills there are very low, and the country more undulating: it consists of an extensive deposition of indurated marly clay, containing organic remains, and small petrified shells: the latter are not of the kind now observed in the living inhabitants of the ocean along the sea-shore The clay is dark, hard, and of a shining fracture; and this kind of formation I am told is observed a considerable distance to the south, and nearly as far as Concepcion. This shelly and marly deposit is found upon a kind of brownish sandstone, composed of rounded silicious particles, and though sufficiently indurated to require separation by a crow-bar, is yet, in small masses, sufficiently friable to be crushed to pieces between the fingers. A very extensive formation of this sandstone, if I may so call it, is observed in an angle of the Cuesta of Valparaiso, where the road ascends from the Almendral over the hill towards Santiago. This steep line of hills forming a termination of one of the lateral forks from the Cordillera, which encircles the bay of

Valparaiso, consists of sienitic granite. This stratified deposition of sandstone I have observed nowhere along the range but in this angle; and though the Cuesta attains an elevation of 1200 feet, I have remarked that the deposit is not seen above 200 feet above the sea. It is distinctly stratified, and appears to be composed of the material of the sienite only half agglutinated: it contains round masses of sienite imbedded in it, which are rough, as if rounded, not by rolling, but by disquamation: it is stratified in horizontal beds, or rather somewhat inclining to the northward; the strata in some cases are only a few inches, in others from five to six feet thick. I have examined carefully, but could no where discover a trace of organic remains: the whole formation appears, as I have said, of sienitic materials and arrangement, only wanting the consistency of rock, denoting in the general notions of geognostic formation an origin of comparatively very recent date. I have observed a somewhat similar formation in the immediate vicinity of my residence, at Concon, at Reñaca, and in many places far to the northward along the sea-coast. At Concon, in several places where I have excavated to a considerable depth, I have discovered a similar species of sandstone granite, containing in some instances an excess of hornblende, in others an excess of felspar intermixed with silex, but always sufficiently indurated as to be with difficulty disintegrated. The points of the hills bounding the course of the river Concon present in their section for the most part a congregation of rounded pebbles, below very large, and above of the size of a walnut

to that of an apple; the depth of these deposites vary from one foot to fifty feet, but in all cases the pebbles are imbedded into a consolidated rock by a cement of hard red clay. Generally over this deposite is superimposed a stratum of black clayey loam four feet and upward in thickness, which serves in many extensive patches as a cement to a close aggregation of recent shells, which seem all of identically the same species that at the present day are commonly thrown on the sea-shore, and of decidedly a different character to the shelly deposites of Bucalemu, and the more southern coast. At two places, about 2000 yards distant, where I have had occasion to make excavations through these shelly deposites, I have found mixed with the shells several human skeletons, the bones of which are yet in good preservation: the ground has been too hard to procure perfect skeletons, but I succeeded in detaching four perfect skulls, which are rather of small size, evidently those of Indians; and were any doubt to exist on the subject, the condition of the teeth would decide the question, as their summits are considerably worn below the enamel, showing a section of the bony interior, as we witness in the existing race of the savage natives of New Zealand.

A question naturally arises, whether the inhumation of these bodies has been coeval with the deposition of the shells: in some cases the want of order in the arrangement of the bones and their appearing to be promiscuously mingled with the shells favours this opinion; but I am inclined to believe, from a circumstance I shall mention, that their apposition has been more recent; but why skeletons

should nowhere have been observed but in the patches of shelly deposites, appears difficult to account for, unless these spots from some religious prejudice may perhaps have been selected by the Aborigines for the burial places of their dead. On digging out these remains, I found among the earth and broken shells, filling the cavity of the cranium, as well as among the same materials enveloping the other bones, a considerable quantity of empty husks of an oval form, about the size of a barberry, which at the time I concluded to have been the remains of berries interred with the bodies, but I am since disposed to think that these husks were no other than the remains of lizards' eggs. Among these human relics, I found an earthenware ornament, as well as numerous fragments of baked earthenware vessels, one piece of which was covered with a coloured glaze; and it is to be remembered that a custom still remains among the unconquered Indians of the south of burying with the remains of the deceased, a jar of chica, or fermented wine, made from berries.

To return, however, to these pebble deposites: on reaching the bottom of these beds I have observed in some few instances that a layer of sandstone intervenes between the pebble deposite, and the soft aggregated rock already described: this sandstone is of no great thickness, of weak coherence, and evidently of recent origin. In many places near the coast, far distant from the beds of rivers, for instance, at Reñaca, between Concon and Valparaiso, the same sandstone is observable without the superposition of the pebble deposite: that of Valparaiso greatly resembles it, only that it is more extensive;

but the whole line of coast south of the river Maypo presents very extensive depositions of the same formation; it there constitutes the whole face of the country, appearing under the form of low rounded hillocks and gentle undulations, forming a striking contrast with the hollow, broken, and stony surface to be seen in all other parts of Chile: this sandstone formation is of considerable depth, and is stratified in horizontal beds of variable thickness: in all cases it rests upon the petrified shelly formation already described. While upon this subject, it is desirable to notice all the circumstances connected with similar formations observed in this part of the continent, and it may be worthy of record that in several spots near the coast, in positions overlying the sandstone, are small deposits of a very fine white magnesian earth, in some places snow-white, in others tinged yellow, easily friable into a powder so fine as not to feel gritty between the teeth: in this state it is found at Reñaca, in Valle Alagre, near Quintero and Valparaiso; but in other places it appears under a more crystalline form, assuming an appearance not unlike that in which steatite often occurs, for instance, near the fort of the Playencia, on the heights of Valparaiso, whence it is dug for the use of the silversmiths of Santiago, who make of it excellent crucibles: in other places I have found it intermixed with small decomposed crystals of hornblende.

In some spots near the coast, for instance, from the point of Concon along the low sandy beach between it and Quintero point, and thence as far as La Ligua, hills of considerable height are observed, of very fine loose sand, so loose as to drift before the

wind: throughout their extent numerous detached beds of recent shells are found upon their summit, offering good evidence that these hills are not downs originating from the drifting of sand thrown upon the sea-beach. So recent indeed are these shells that they are burned for lime: still more extensive beds are found buried in shells upon Quintero point, whence the town of Valparaiso and Quillota are supplied with lime. The recent shelly deposites mixed with loam I have traced to places three leagues from the coast, at a height of 500 feet above the level of the sea: and I have been informed by a tenant of Ocoa estate, within the boundaries of which is the Campana, or Bell Mountain of Quillota, that shells are to be seen at the summit of that mountain which must attain an elevation of more than 2000 feet: I am at no time disposed to place much reliance upon the information of a Chileno, but as I can conceive no motive for inventing a tale of that kind unasked for, I am disposed to mention it: the upper part of the mountain is precipitous, and its summit can only be reached on one side: the adjoining hills are of sienite, with interventions of primitive calcarious formations.

These circumstances, as well as another which will be mentioned, may probably throw some light on the cause of such very recent shelly deposites in a country whose rocks are of primitive origin; I allude to the sudden elevation of the whole line of coast in the neighbourhood I have been describing during the earthquake of November 1822; for if, as we have seen, the country has been raised by the effect of earthquakes, it is fair to conclude

that, by the successive operation of such causes, we may account for the facts just described; and it is rendered extremely probable that the whole range of the Cordillera, have been, and still continue to be gradually emerging upwards above the level of the sea.

In the neighbourhood of Coquimbo, where the same species of granite constitutes the general mountainous formation of the province, an extensive shelly stratification is found, bearing some analogy to the testaceous rocks of Bucalemu; I observe among the geological specimens brought home by Captain Basil Hall, and by him presented to the Geological Society, they are pronounced to be "an alluvial shell conglomerate." The best account of this formation is in Molina's work, in which, though the description is not the most scientific, it is the most minutely detailed: "in a plain near the city of Coquimbo, at the depth of three or four feet, is found a white testaceous marble, somewhat granulated. It is filled with shells of the snail kind, more or less entire, which give it the appearance of shell work: the quarry is several miles in extent, and generally about two feet in thickness, but varying according to the number of the strata, which are from five to eight, frequently interrupted by very thin layers of sand: these strata increase in hardness in proportion to their depth; the upper consists wholly of a coarse brittle stone, which is only proper for lime, but the marble of the other is very compact, requires but little labor to dig, and, after a short exposure to the air, obtains a degree of solidity and firmness sufficient to resist the injuries of the weather." The

latter sentence, in reference to so dry a climate as Coquimbo, still further confirms the analogy I have remarked; and this is again increased by the circumstance, that among the geological specimens collected by Captain Hall in the same neighbourhood, are "alluvial sandstone," and "limestone probably alluvial."

The town of Rancagua, or Santa Croce de Triana, is seated about the same distance from the sea as the metropolitan city, upon the margin of the river Cachapoal: like other towns, it is divided into squares, or quadras; the houses are of one ground story, of mean appearance, built of mud, whitewashed and tiled: it has a miserable plaza, or public square, and its outskirts, or suburbs, consist of extensive enclosures of cultivated ground, fenced in by tapias, or rammed earthen walls.

The baths of Cauquenes are situated in the Cordillera, in a deep ravine leading from the sources of the Cachapoal; they are seated in a most romantic situation, on a very narrow, confined, and elevated table height, close to the margin of a precipice, at the foot of which, and at the perpendicular depth of 100 feet, the river Cachapoal flows: the hills that overhang this height are covered with trees, while, in the winter time, the summits of the greater heights are covered with snow, at the period when the temperature of this valley, under a cloudless sky, is warm and delightful. There are four principal springs of hot water, flowing into as many reservoirs about five feet long; they are of the temperature of 100° and upwards, and are stated to be so hot that it is painful to remain in them; though the persons

who have charge of them keep the patients in the bath against their will by force till the proper time of immersion has expired. The baths are greatly frequented in the summer season, being celebrated for the cure of all complaints, and infallible in cases of rheumatism and syphilis—complaints to which the natives are extremely subject: some of the springs are sulphureous, like those of Harrowgate; others are saline; others again, though very hot, are merely gaseous, like those of Villa Vicencio; some are tepid, and others extremely cold; both the hot and cold springs, which are numerous, are all within a small space.

8. COLCHAGUA.—This is a very fertile province, extending from the central Cordillera on the east, to the Pacific Ocean on the west, and from the province of Rancagua on the north to the province of Maule on the south, from which it is separated by the rivers Teno and Mataquito, being a distance from east to west of about eighty miles, and from north to south of fifty-five miles; it is well watered by the rivers which form its northern and southern boundaries, and by the auxiliary streams and rivulets that fall into them; those which fall into the Cachapoal are the Tinguiririca and Clarillo, and the rivulet of Chimbarougo. The small river Nilahue, or Bichuquen, rises in the middle of the province from a range of hills lying to the westward of San Fernando, and falls into the sea, a little to the southward of the village and bay of La Navidad: this stream receives many little rivulets, or esteros. At no great distance from San Fernando is the lake of Taguatagua, in the centre of which are several small islands; these, like

the shores of the lake, are well wooded; the lake itself is much frequented by wild fowl, and is altogether a most delightful spot.

This province abounds in timber trees, of which the provinces northward of the river Maypo are nearly destitute; it is divided into several large estates, which are extremely productive; these estates yield corn; there are also many fine vineyards.

The principal town of the province, called San Fernando, is somewhat smaller than Rancagua; it is built on the river Tinguiririca, and in its neighbourhood are several farms of considerable value.

There are several villages situated in different parts of the province, such as Malloa, Rosario, and others. Near San Fernando finely variegated marble is said to abound.

9. MAULE.—The province of Maule extends from the central Cordillera on the east, to the Pacific Ocean on the west, and from the province of Colchagua on the north, to the provinces of Itata and Chillan on the south, from which it is separated by the rivers Longuen and Itata, being a distance from east to west of about seventy-five miles, and from north to south of fifty miles.

This province will in time become one of the most important in the country; it is large, well watered, contains many resources, and is generally susceptible of cultivation. The river Maule, one of the most important in Chile, receives the waters of many contributary streams, such as the Claro, Talca, Putagan, Archiguenu, Liguay, Longavi, Perquilauquen; the five last named unite into one arm called the river Longamillo, before it reaches the Maule. There are

numerous other rivulets that water the country, such as the Huenchullami, Cauguenes, and others. The face of the country though hilly, presents a greater extent of level and cultivatable surface than any of the more northern provinces. It is extremely well wooded, and in many parts of the province, especially in the neighbourhood of the rivers, several sorts of timber trees, of considerable size, and good quality abound. The climate of Maule is remarkably fine and favourable to vegetation, as the winter rains are of longer duration, and more frequent in their recurrence than in the northern provinces: these, with the springs which abound in all parts, render unnecessary to a great extent the expensive process of irrigation, which the people to the northward are compelled to resort to. The principal town is Talca, delightfully situated in a little valley upon the river Claro, on the high road from Santiago to Concepcion. Its distance from Santiago being 240 miles, from Valparaiso 270 miles, from Rancagua 168 miles, from Chillan 120 miles, from Concepcion 240 miles: it is a small place, and its population does not probably exceed 1000; its neighbourhood is well cultivated.

The village of Curico is prettily situated between the rivers Teno and Loutue, above the place where their junction constitutes the river Mataquito: it is seated at the foot of a little range of hills proceeding from the Cordillera; this village, or town as it is called, lies on the high road from Rancagua to Talca, being distant from the latter sixty miles, from the former 108 miles, and from San Fernando, in the same route, sixty miles. This place is deserving of

notice, as being the point of exit over the Cordillera by the pass of the Planchon before described, and as the point to where the Indians on the opposite side bring their goods for barter.

Cauquesas is another small village, seated in a plain between the rivulets of Tutuben and Cauquenes, it lies seventy-five miles to the SSW of Talca, and sixty miles to the NNW of Chillan.

The village of Maule is seated near the mouth of the river of that name. It is a poor mean town, though it has increased considerably since the revolution, in consequence of the building of craft and boats for carrying timber to Valparaiso. Timber is cheap; the price of logs of roble, of pellin, or of lingui, twenty-four feet long, and eight inches square, is from a dollar to a dollar and a half each, (four to six shillings English); but on my arrival in Chile, although I could have procured as much timber as I pleased, placed on the beach of the Maule at this price, it was impossible to convey it to Valparaiso, a distance of only one day's sail, under a charge of from sixteen to twenty dollars for each log. Timber of the length of thirty-six feet, and ten inches square, may be abundantly procured; some has been felled of the length of sixty feet, and two feet square: the largest trees are of caiba, a name given by the Spaniards to mahogany, though I am told the wood more resembles elm. I have never seen it, and none, I am told, grows to the northward of the Maule. The harbour of Maule is capacious, and well sheltered on all sides by hills: it is formed by an inlet, or enlargement of the river's mouth, outside of which is a bar of sand, which does not admit any vessel to

enter, even at high tide with safety, if it draws more than eleven feet of water: the tide here does not rise above four feet.

At the southern bank of the mouth of the river, a low sandy point extends a considerable way into the sea, connecting the main land with a reef of rocks. Over this sandy isthmus the sea breaks at all times; this bank extends across the river's mouth, and forms the bar before mentioned. Whenever a pier or breakwater shall be built from the shore to a reef of rocks, so as to prevent the water of the river from flowing over the bank, it is probable that the floods caused by heavy rains will cut a channel through the bar, and thus permit vessels to enter the river in safety. As it is, even with a pilot, the entrance is difficult and hazardous: this will become a matter of some importance to Chile, and this province more especially, as its trade, its population, and its agriculture increase. In this case, and in the event of a relaxation of the commercial restrictive system, wheat and other produce of the soil may be exported with more ease and at less expence than they can be from other parts which have not the facility afforded by river navigation.

There are several villages of inconsiderable note, such as Lora, on the coast, near the mouth of the Matiquito, Bella Isla on the river Longamilla, and a few others; but the population, which is very scanty, is generally spread over the province upon the several haciendas, or farms, which are numerous and fertile: but from the want of hands, more especially of the distance of Talca from Santiago and Concepcion, cultivation has never extended

itself in the same ratio as the provinces of Colchagua and Rancagua. The expense of land carriage, and the cost of conveyance to the distant markets amount to more than the value of the produce; from these impediments the population of the province has not increased, neither will it increase so long as inducements are held out to emigration into the other provinces, where greater facilities and encouragement to exertion are found. The productiveness of Maule, its fine soil and climate, will one day place it above the others in point of importance, but this day is very distant.

The chief produce of the province is cattle; but this kind of farming, conducted as it is in Chile, does not encourage the growth of population. Formerly, the manufacture of charqui was carried on to a great extent for the Peruvian market, and the supply of shipping; but the preparation of salt beef by foreigners has, in great measure, diminished the consumption of charqui. Formerly too the manufacture of cheese, which was exported to Peru and Buenos Ayres, was considerable. It was prepared principally in that part of the province of which the estate of Chanco is the centre, and hence the name of Chanco cheese is proverbial thoughout all South America. The character of the people differs widely from those of the more northern provinces; they have darker complexions, less beard, eyes less separated, lower foreheads, and more pointed chins; they are, in fact, the true Promaucians, inhabiting the country of Promaucaes of the Aborigines, as that portion of Chile lying between the Maule and the Biobio was called, a race that the Incas of Peru

could not subjugate as they did the more docile inhabitants of Chilimapu, or that portion lying to the north of the river Maypo. They still preserve the same difference of character, being naturally more ferocious, savage, thievish, and unsettled. A Chileno who is a notorious thief, or a fearless vagabond, is invariably styled through the country a Maulino; and any peasant from that province is looked upon by the more northern Chilenos with constant suspicion.

The dress and habits of these people differ but little from the others, except in their caps, which are mostly conical, of blue woollen cloth, somewhat resembling those of the Greeks, but their heads are more covered, and their caps are longer. The Indians, if they may be so called, still possess many little settlements in the province, or rather I should say their descendants retain little farms that have never been appropriated or given away by the king of Spain; they, however, are but small, and thinly peopled: they are at Huenchullami, Liban, Loanco, Chanco, Couque, Curà, Puachun, Negunche, &c. There are said to be many gold mines, some in the vicinity of Cauquenu, and Huillipatagua, but more especially in the Cordillera, to the eastward of Talca. The accounts of their richness and extent are doubtless exaggerated; the best proof is the small product which has at any time been obtained from them.

There are said to be some rich copper mines in the vicinity of Curico, but they have been very little wrought: an attempt was made before I left Chile to re-establish the working of these mines, but the

object failed; indeed I considered the reputed richness of these mines to be wholly fabulous.

In the Cordillera, about the sources of the river Longavi, and near the volcano of Peteroa, are some formations of copperas, or sulphate of iron, which is sometimes met with in a state nearly pure, sometimes mixed with alum. The Maulinos are in the habit of extracting both, which are carried to different parts of the country, and sold to the country pulperos, or chandler's shops, there being a considerable consumption of these salts, both of which bear the name of polcura; alum is called polcura blanca, (white polcura) which I have reason to believe is brought from the opposite side of the Cordillera.

The Cordillera, I apprehend, does not differ in structure from the part which is elsewhere minutely described: there is a very good pass, called that of the Planchon, which leads up to the sources of the river Teno, a pass which has been elsewhere mentioned. In the Cordillera bordering on this province are two remarkable peaks, one to the northward, the other to the southward of the pass; the former is called the Descabezado, or Blanquillo, the latter the Volcan de Peteroa. The Descabezado is said not to attain so great an elevation as the peak of Tupungato, which I have elsewhere shown cannot be higher than 15,000 feet above the level of the sea; it is called the Descabezado, or truncated mountain, from being in the form of a truncated cone: Molina says that its flat top exhibits a plain of more than six miles square, which is evidently a cuenta de frayle, a friar's story, as the Chilenos call any exaggerated or improbable tale: he adds, moreover, "that in the middle is a

very deep lake, which, from every appearance, was formerly the crater of a volcano.". This hypothesis is much at variance with another circumstance which he relates respecting it ;—" that on its top various shells, such as oysters, conchs, and periwinkles, are found in a calcined or petrified state, evidently deposited there by the waters of the deluge." The same tale is recounted of the existence of shells on the summit of the Cordillera at Los Patos, and at the Cumbre of Las Cuevas, which I have shown to be incorrect : the mountain structures, there asserted to be fossilized marine formations, turn out to be an amygdaloidal porphyritic greenstone. The only circumstance that seems to favor the assertion that the Descabezado is an extinct volcano, is the shape of its summit ; but this proves little, as it may be accidental. Peteroa, on the contrary, is undoubtedly a volcano—it exhibited a violent eruption about sixty-five years ago : " this happened," says Molina, " on the 3rd of December, 1760, when it formed for itself a new crater, and a neighbouring mountain was rent asunder for many miles in extent. The eruption was accompanied by a dreadful explosion, which was heard throughout the whole country : fortunately it was not succeeded by any very violent shocks of an earthquake. The quantity of lava and ashes was so great that it filled the neighbouring vallies, and occasioned a rise of the waters of Tinguiririca, which continued for many days.* At the same time the

* The same consequences followed at the great earthquake in 1822, in the rise of the river Concon, and other streams in Chile, by shaking down the snow, and exposing it to a more rapid melting.

course of the Lontue, a very considerable river, was impeded for ten days by a part of the mountain, which fell and filled its bed. The water at length forced itself a passage, overflowed all the neighbouring plains, and formed a lake, which still remains.

CHAPTER XII.

CHILE DESCRIBED.

Third, or Southern Jurisdiction, containing the Provinces of—X. Chillan.—XI. Itata.—XII. Rere, or Huilquilemu.—XIII. Puchacal.—Fertility of these Provinces.—Bay, Harbour, and City of Concepcion.

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10. CHILLAN.—This is the first province of the third, or southern jurisdiction of Chile: it extends from the central Cordillera on the east to the province of Itata on the west, and from the province of Maule on the north to the province of Rere on the south, being a distance, from east to west, of about fifty-five miles, and from north to south, of forty miles. It is a small, but very fertile province, consisting of mountain ranges to the eastward, and beautiful and well watered plains to the westward. Its streams are the Nuble, Cato, Chillan, Dinguillin, Dañicalguin, and Guilliayo, all flowing from the Cordillera, and form together the river Itata. The town of Chillan, called also San Bartolomeo, was seated near the margin of the river of the same name. The earthquake of 1751 levelled it to the ground; and, as it has been subjected to inundations of the river at various periods, the town was rebuilt in its present situation. Previous to the revolution the population of Chillan was greater than it is at present, but the civil war, and the numerous incursions of the unconquered Indians of Arauco have, to a con-

siderable extent, decreased the population of the whole province, and no more land is cultivated than is barely sufficient for the sustenance of the inhabitants.

11. ITATA.—The province of Itata extends from the province of Chillan on the east to the Pacific Ocean on the west, and from the province of Maule on the north to the province of Concepcion on the south—being a distance, from east to west of about forty miles, and from north to south of forty miles. The river Itata, formed by the union of the several rivers of Chillan, runs through the middle of the province, dividing it into two portions, the more northerly of which is marked by a line following a range of hills bordering the course of the river Lonquen, and terminating at the eastern point of the river Itata; the southern and larger portion by a line of hills running midway through the country, lying between the rivers Itata and Biobio.

The river Itata is much wider and deeper than the Maule; its course is interrupted by ledges of rocks; and its banks, being rocky and precipitous, do not admit of its irrigating the neighbouring country. The Lonquen is a very small stream. The town of Itata, or Jesus de Coulemu, is situated near the mouth of the river in a delightful plain, which formerly was highly cultivated, as was the greater part of this beautiful province, whence the town of Concepcion drew great part of its supplies. Its chief productions were corn and wine, especially the latter, which was famed through all South America as Penco or Concepcion wine. The vineyards are said to be very extensive; the grapes are black and fine flavored; the climate and soil are so well adapted to

their culture, that the vintage scarcely ever failed; and seldom or ever required the aid of irrigation.

The land is equally well adapted for the growth of wheat, which formerly was cultivated to a considerable extent: but the alternate possession of the city of Concepcion by the Spaniards and patriots, the desolation committed as well by the royalists and patriot armies, and completed by the renegado Benavides and his followers, put an end to the commerce of Concepcion, and drove away all the capitalists from the city, as well as the hacendados from their estates in the provinces of Itata, Chillan, Pucahcal, and La Laxa. The hacendas, which were numerous and well peopled, are now in great measure deserted by the peasants; the miserable beings, who remain, live almost without restraint, and cultivate such portions of the ground as they require for their subsistence: while nearly all the vineyards, so long neglected, have become ruined; and the buildings, and bodegas for the preparation of wines and spirits, are either destroyed or fallen to decay.

The present government of Chile is so unable to afford protection either to property or person, that the haciendados dare not return to their farms, but remain chiefly at Santiago, employing what they have been able to save from the wreck of their fortunes in commercial pursuits.

There are several lavaderos in the ravines of the hilly districts, where many poor people employ their time in searching, grinding, and washing for gold; the small produce they obtain is sufficient to satisfy the very few wants of these miserable creatures.

12. RERE, or HUILQUILEMU.—This province

extends from the Cordillera on the east to the province of Puchacal on the west, and from the province of Chillan on the north to the Indian territory on the south, being a distance from east to west of about sixty-five miles, and from north to south of fifty miles. Its line of demarcation on the north and west is by a cordon of mountains extending from the Cordillera, first westward, and then south-westward. It is equal in climate, fertility, and capability to any in Chile, but owing to the political causes before-mentioned, its productiveness is of little avail: it is watered by the rivers Claro, La Laxa, Guaque, and Duqueco, all forming so many tributary branches to the principal river Biobio. It is well wooded, all the ravines, most of the hills, and many of the plains being well covered with fine timber. The river Biobio is navigated as high as Nacimiento in canoes, floats, and rafts, by which means the produce of the country is conveyed to Concepcion at a trifling expence, and exchanged for the few materials of which they stand in need: these are advantages which no other province in Chile possesses. The little value which the people of the interior place upon labour necessary to the supply of their few wants, enables them to convey timber to Concepcion at a very cheap rate, and were these fine districts settled under a protecting and fostering government, the population would be greatly increased by emigration from the more barren provinces of the north.

Yumbel is the chief town of the province: it is on the road from the metropolis to Concepcion, being sixty miles from the latter, sixty miles from Chillan, 180 miles from Talca, and 420 miles from Santiago.

It is a very small town, and there is nothing in its neighbourhood particularly worthy of notice, if we except the village or town of San Luis Gonzaga, which was formerly the residence of the military governor and local authorities. There are many little villages established about the several forts, which the Spaniards erected and maintained as a line of defence against the encroachments of the Indians. These are Tucapel on the La Laxa river, Los Angelos, Puren, and Santa Barbara, on the north side of the Biobio. The Spaniards also erected another line of forts along the southern bank of the same river, upon the territories of the Indians, to overawe them. Most of these forts had settlements of villagers about them, but settlers possessed no ground beyond the reach of their guns. The principal forts were called Nacimiento and Puen.

13. PUCHACAL.—This province, called also Penco and Concepcion, is the last to be described. It extends from the province of Rere on the east to the Pacific Ocean on the west, and from the province of Itata on the north to the Indian territory of Arauco on the south, from which it is separated by the river Biobio, being a distance of about fifty miles east and west, and forty miles north and south. The soil of this province is extremely fertile, and, under the government of the Spaniards, was carried to as high a pitch of cultivation as any lands in Chile; the proprietors then lived always either on their estates or in the neighbouring city of Concepcion; since the proprietors have abandoned their estates, and deserted the province, the country has been subject to the inroads of the Indians, and is comparatively deso-

lated and depopulated. Its rivers are the Biobio and Andalien, the latter a small stream falling into the bay of Concepcion, through the valley of Penco, at the mouth of which formerly stood the old city of Concepcion, which has been twice destroyed by earthquakes. Its principal harbor is in the bay of Concepcion, formed by a kind of hilly promontory tending northward from the mouth of the Biobio. The isthmus connecting it with the mountainous ranges of Gualqui forms a low neck of land, separating the bay from the river Biobio: on the southern margin of this isthmus, which is rather more than three miles broad, is built the city of Concepcion; the bay is in the form of a crescent, the hilly promontory of Talcahuano just mentioned forming its western point, and the hills of Tomè on the opposite side of the harbour forming its northern termination at the point called De Loberia. The diameter of the circle thus inclosed to form the harbor is five miles, but the mouth is still farther shut in by the island of Quiriquina, placed nearly midway in its entrance, dividing it into two channels, and more effectually protecting and completing the harbour: the more northerly channel is the principal entrance; its width from the island to Point Loberia is two miles; the southern entrance between the island and Talcahuano Point is about a mile and a quarter. There may be said to be three harbours: that of Talcahuano, which is the most secure, lying under the promontory in the south-west; that of Cerillo Verde, near the scite of the old city of Penco in the south-east; and that of Tomè on the north-west of the bay. The principal entrance to the bay has thirty fathoms water, diminishing gra-

dually to twelve fathoms in the middle of the bay; and this depth is found in all parts within three quarters of a mile from the beach: the southern channel has thirty fathoms at its commencement, and eleven fathoms at its entrance into the Talcahuano anchorage. The holding ground throughout the harbour is excellent, the bottom being of ooze and free from rocks, but the anchorage of Talcahuano is always preferred, as vessels lie there secure from all winds, while the other anchorages are exposed to the strong southerly winds which blow into the bay over the low isthmus of Concepcion, from the Araucanian territory, so as frequently to endanger their safety: the consequence is, that Talcahuano has become the sea-port to the city of Concepcion, although distant from it twelve miles. The land on the east side of the harbour is high, the sides are planted with vines and fruit trees.

The bay of Concepcion, with its secure ports, its vicinity to the city of Concepcion, formerly the capital of Chile, the convenience of river navigation with the interior, the greater productiveness of soil in the adjacent territory, its climate more congenial to activity and industry, presents much greater advantages for commercial traffic than Valparaiso, or any other port or harbour in Chile, and will no doubt in time become a place of the greatest importance. It has generally been the policy of the Spaniards to build their principal towns far in the interior, for instance at Mexico, at Quito, at Santa Fè de Bogota, and at Santiago, in Chile: powerful circumstances in all these instances induced such a line of policy; but as these motives will, under a better government, and a less

restricted trade, no longer exist, the people, left to act for themselves, will chuse such places for their residence as will best suit their convenience and their interests. It is clear that the population will extend itself in those places where the greatest quantity of conveniences can be most easily obtained, and we may therefore expect that this will take place in the province of Concepcion, whither, from the increase of people, of trade, commerce, and riches, the seat of government will in time be removed. In several conversations with the Ex-director, General O'Higgins, on this subject, who is a Penquisto, as the natives of the four more southern provinces are called, it was apparent that this was his opinion, and as his colleagues in office were natives of the same district, they also were desirous that the seat of government should be removed to Concepcion as soon as circumstances would permit, but it is evident that a considerable time must elapse before any such measure can be carried into effect. It is impossible now to prevent the final independence of Chile, and though many years may pass over before the people will be able advantageously to govern themselves, though much struggling of parties and destruction of life in party conflicts will probably occur before all the influential people of the country will perceive their own interests, and unite in a common bond of union; though much time will elapse before right notions will be formed on these subjects, and social order be established among them, still the day, however distant, must arrive when Chile will attain a commanding situation among the nations of the new continent.

There is another harbour, called San Vicente, situated on the western side of the promontory of Talcahuano, which, though in other respects well shut in, is exposed to a perpetual swell, which rolls in from the ocean, and which, with its rocky channel, makes it less secure than any of the others: it has besides a shallow sandy beach, over which the surf breaks violently at times, rendering it difficult to land in boats.

Formerly the city of Concepcion (called also Penco from the name of the Indian settlement previously existing there) was built on the south eastern part of the harbour, at the spot where the river Andalun, or San Pedro, emptied itself. It was many times taken and destroyed by the Indians, thrown down by an earthquake in the year 1730, and finally destroyed by another tremendous earthquake in the year 1751, followed by a sudden rise of the sea; that completed the ruin of the city: the fear of being engulphed by the ocean frightened the inhabitants more than the earthquake itself, and this apprehension caused the principal people to remove to their estates; some, however, retired with the officers of government, and built a small town called San Juan Baptista, or Qualqui, the original Indian name of the spot. In 1763 the inhabitants again took courage, and determined to rebuild the city of Concepcion, its situation being judiciously chosen on an elevated position of the isthmus, half a mile from the river Biobio; from a higher level of which river an azequia, or canal of water, was brought for the supply of the city. The new city of Concepcion

contained several good buildings, and its population amounted to 20,000, but the events of the late revolution have driven away not only the richer inhabitants, but a great portion of the poorer also. Extreme poverty is now seen every where, the cathedral, the palace, and other public buildings have been destroyed, as well by patriots and royalists as by brigand chiefs, and still remain in ruins, their earthy materials quickly mouldering beneath the influence of a comparatively humid atmosphere; its principal houses are empty, and going fast to ruin; its streets are filthy and odious beyond description; its trade is annihilated; the want of occupation and excitement only rendering a naturally indolent people more slothful; robbery and crime have increased in proportion as misery and want of police have prevailed, and these have extended so far that the ordinary protectors of justice have themselves become burglars and robbers. In short, Concepcion, the second city in Chile, of which so many bombastic accounts have been given, is become the theatre of poverty, of brutality, of injustice, and of crime. From all I could hear, the population of Concepcion does not at present exceed 5000 persons, and these are all of the lowest class.

Talcahuano is a town that has of late years increased, in consequence of the protection which its batteries have afforded against the numerous enemies which have assailed the capital.

In the province of Puchacal are several reputed gold mines, among which are those at Quillacoya, five leagues from Gualqui, the same distance from Talcamavida, and six leagues from Santa Juana.

The number of square miles, and the amount of the population of each of the provinces, may be estimated as follows:

Provinces.	Square Miles.	Population.
Copiapo	18,750	10,000
Coquimbo	13,300	20,000
Quillota	4,600	40,000
Aconcagua	4,400	60,000
Santiago	3,830	90,000
Melipilli	850	20,000
Rancagua	3,830	70,000
Colchagua	4,400	80,000
Maule	3,750	50,000
Chillan	2,200	30,000
Itata	1,800	20,000
Rere	3,250	30,000
Puchacal.....	2,000	40,000
Total ..	66,960	560,000

About $8\frac{1}{3}$ to each square mile.

CHAPTER XIII.

INDIAN CHILE.

Its divisions.—City and Harbour of Valdivia.—Capture of Valdivia by Lord Cochrane.

THE Indian territory commences to the southward of the Biobio; and, although the Indians themselves separate the country into about twenty divisions, it may with greater propriety be treated of under the following designations:

1. Arauco. 4. Boroa. 7. Cunches.
2. Puren. 5. Maquegua. 8. Guilliches.
3. Repocura. 6. Tolten.

1. ARAUCO lies on the sea-soast, between the rivers Biobio and Cauten; it is watered by the smaller streams, Carampangui, Leubu, Paicabi, and Lieu-lieu Tirua. It is separated from Puren by a range of hills extending from opposite Talamarida to the scite of the old city of Imperial, several times rebuilt by the Spaniards, and as often destroyed by the Indians. The Chilenos still maintain upon the southern bank of the Biobio the fortified positions of Arauco, Colcura, and San Pedro. The first is a small town, surrounded by a wall on three sides; on the other side is a steep hill, on the top of which is a fort, mounting six guns, which command the town and harbor. The only accessible part of this

hill is by a narrow pass within the walls of the town: the walls are twelve feet high, built with stones, the interstices being filled with mud. It is a sufficient defence against the Indians. The place during the revolution has been in the alternate possession of the Spaniards, the Patriots, and the brigand Benavides, who during the greater part of his career held his head-quarters here. Colcura and San Pedro are mere forts to check the irruptions of the Indians at those parts of the river where it is most easily fordable.

2. PUREN lies to the eastward of the before-mentioned range of hills, to which is given in the north the name of La Cuesta de la Lia, in the middle La Cuesta de Puren, and in the south La Cuesta de los Pinares. It is watered by the rivers Tabolebo, Biobio, and Pichoiquen, toward the north; on the south by the Lico and the Cholchol. It has the fort and village of Nacimiento on the line of its northern boundary, and the fort of Puren near its centre, and is eight leagues distant from that of Arauco, and also eight leagues from the scite of Tucapelviejo. At no great distance from the fort of Puren are some gold mines.

3. REPOCURA, including the district of Quicheraguas in the Cordillera, lies to the eastward of the former, is watered by many streams tributary to the river Cauten, and would by the aid of industry become a country of great fertility. The Spaniards built a town upon the river Cauten, in a spot beautifully situated; it was several times taken and destroyed by the Indians. When the Spaniards finally withdrew, the place was totally destroyed; not

even a vestige now remains of its former situation. This town, called the city of Imperial, was seated twelve miles from the sea, at the confluence of the Las Damas with the Cauten, where both rivers are so deep that vessels of considerable burden have laid close to the city walls. The river is broad and navigable, and might be formed into a fine harbour, but that at the entrance there is a bar. The river has three fathoms and a half water close to the banks. The country around is described as being remarkably beautiful, the hills are gentle and undulating, and the seasons so well supplied with rain and dews that irrigation is no where necessary: all parts of the country alike are capable of producing wheat, vegetables, and fruits of various kinds, in great profusion, and the pasture is excellent. This place is forty leagues from Concepcion.

4. BOROA, including Mequegua on the eastward, is a large tract of country, between the rivers Cauten and Totten: it is well watered, has numerous vallies and level plains, susceptible of cultivation.

5. TOLTEN, divided by the Indians into high and low Tolten, lies between the rivers Tolten and Tres Cruces: it is well watered by the numerous rivulets and auxiliary branches of these rivers; has very extensive plains, and many rich vallies, with fine timber and a water communication with the harbour of Valdivia. In the eastern part of Tolten the Spaniards several times attempted to establish the city of Villarica, but were always driven out by the Indians, who destroyed the place. This town was situated in the centre of a large productive plain, in the neighbour-

hood of a lake, called by the same name by the Spaniards, and Lauquen by the Indians: it is near the base of the volcano of Villarica, in whose neighbourhood there are said to be many rich gold mines: the town was 120 miles distant from Concepcion, and fifty miles from Imperial.

The river Tolten is said to be navigable by ships of a large class, there being no obstruction to their entrance from the sea.

Thirty miles north of Valdivia is the river Queuli. Small vessels can enter this river with facility.

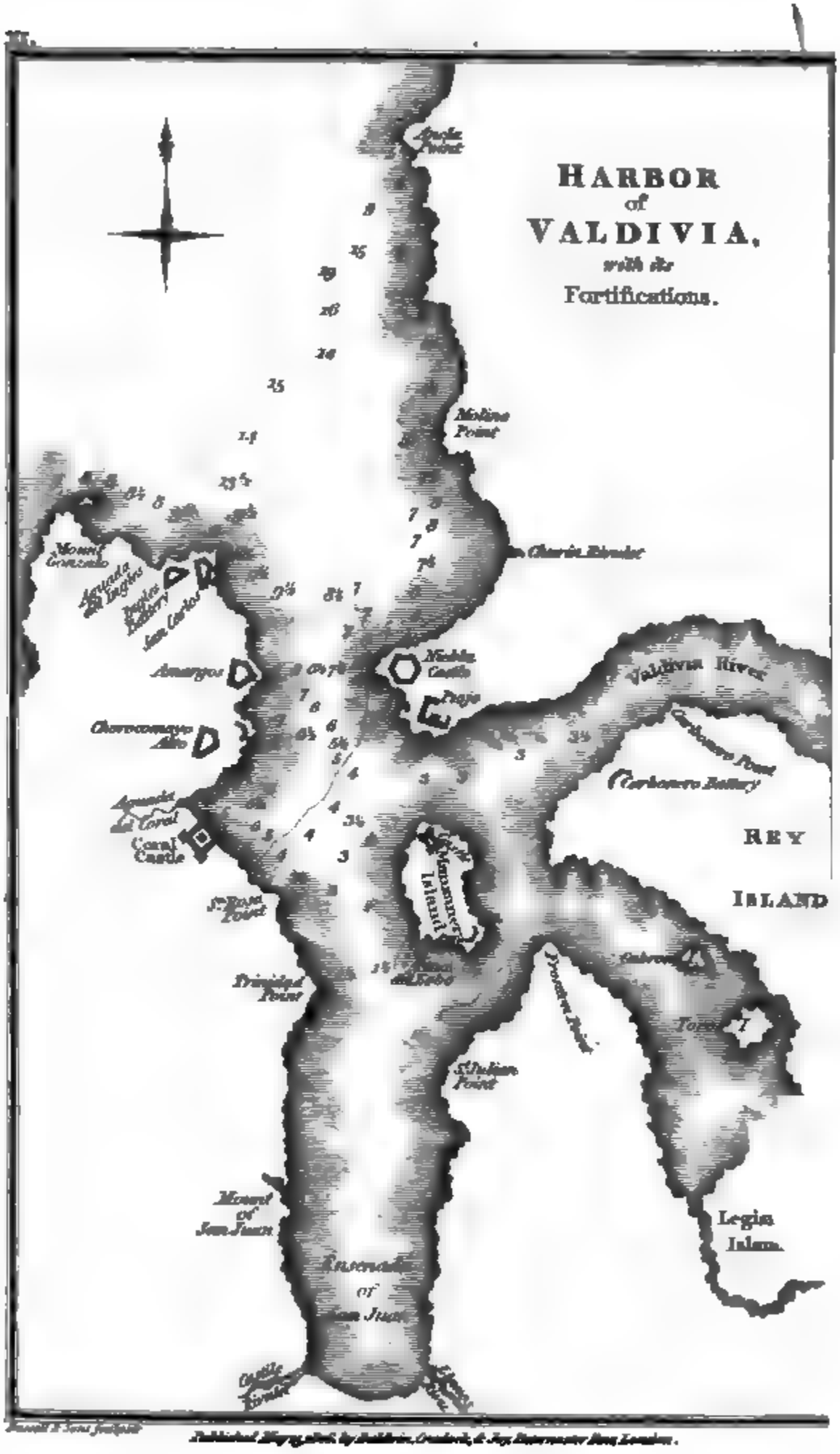
The country to the southward of Valdivia is divided into two parts; the westernmost called Guinchi, being inhabited by the Guinchis, or Cunches, the easternmost by the Huilliches.

Guinchi is stated to be a magnificent country, well watered, delightfully wooded, and gifted with a most genial climate: towards the south, more especially, it is very level. Here are the lakes of Osorno and Huanaco, both of considerable extent. General Ambrosio O'Higgins, when commander in the south, endeavoured to re-establish the former settlement here, but he failed in the attempt. As a reward, however, for his exertions in pacifying the Indians, and for other important services rendered to Chile and Peru, he obtained from the King of Spain the title of Marquis of Osorno.

VALDIVIA is the district included between the rivers Tres Cruces and Callacalla, including to the eastward the territory of Huanahue. The country is extremely fertile, less hilly than the more northern provinces, almost its whole extent being susceptible of cultivation. Very small portions of the interior

are cultivated by the few Indians who inhabit it. The country is abundantly wooded, well watered, has extensive plains and rich valleys covered with the wild strawberry, and the margins of its rivers crowded with wild apple trees.

The harbour of Valdivia is unquestionably the finest in the Pacific; its entrance is known by two remarkable hills, of which that on the north, called the Morro Bonifacio, is considerably higher than that on the south, called the Morro Gonzalo. At the mouth of the harbour there are from fourteen to nineteen fathoms water, decreasing gradually to eight fathoms in the narrowest part of the channel, which is three quarters of a mile wide; on the northern side is the castle of Niebla, and on the southern the strong fort of Amargos. On passing this narrow straight we arrive at a large estuary, in the midst of which are several islands, formed by the rivers which flow into it: in the south-west corner of this bay, under the shelter of high, rocky, and steep hills, and under the castle of Coral, is the principal harbour, where ships of the line can ride in safety secure from all winds: the water is here so deep and smooth that a man of war has been hove down and careened so close to the shore that persons have walked from the landing-place to the vessel upon a plank. The depth of water in the centre of the bay is from six to seven fathoms, and five fathoms close to the shore: from Point Niebla to Point Santa Rosa, about half a mile to the eastward of Coral Castle, the bar of the rivers Tres Cruces and Callacalla stretches across the estuary. The water is here diminished to four fa-



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thoms, which gradually lessens to two fathoms near the Island of Manzira, which is about three-fourths of a mile long, and one-third of a mile broad, placed in front of the narrow entrance, at the distance of half a mile from the Niebla point, between which is the channel that leads up to the town of Valdivia. Farther within this estuary, to the westward, is the Island Del Rey, between which and the main land is a channel rather more than a quarter of a mile broad, having from three to four fathoms water. Farther inwards are several little islets, and an island called Constantine in front of the town of Valdivia: between this island and the main land small ships can proceed in safety as far as Valdivia, while larger vessels require to pass between the islands Constantine and Del Rey. The town of Valdivia stands on a point of land at the mouth, and on the southern bank of the river Callacalla, and is sixteen miles from the anchorage at Coral Castle: it is seated on an elevated plain, above the level of the surrounding beautiful and romantic country. In front of the town is another island, formed by the junction of the two rivers Callacalla and Tres Cruces. The town of Valdivia is small, and with its Indian suburb contains a population of about 800. The interior of the country belongs to the Indians. The government of Chile exercises no farther jurisdiction over it than the space within the immediate range of its guns. The harbour of Valdivia is strongly fortified, mounting in its several forts and castles, at the time it was captured in 1820, by Lord Cochrane, 128 pieces of cannon of various calibres; its four principal batteries being at four nearly equal

points, mounting 100 guns, whose fires cross each other in all directions, commanding at the same time the entrance, the anchorage, and the channel that leads to Valdivia. The different armed stations and forts are numerous: a little to the westward of point Gonzalo is the fort of Aquada del Inglis, which commands a small landing place; near it, and a little farther to the westward, is Fort San Carlos, mounting several pieces of cannon: at the southern point of the narrow entrance into the bay, overlooking the low perpendicular and inaccessible rocky parapet that forms the margin of the channel, is the Fort of Amargos; a little farther to the southward is the hill of Chorocomayo, on which are two powerful batteries one behind the other, and still more to the southward is the great castle of coral, which as well as Chorocomayo commands the anchorage. On the island Manzanera is a square fort mounted with large cannon which command the passages of the river, the anchorage, and the entrance: on the southern point of Niebla promontory, on the northern coast, is the castle of Piojo, well mounted with cannon; and at the western point of the promontory in front of Amargos, and abreast of the narrow entrance, is the great castle of Niebla. There are in the whole fifteen forts, so placed that no ship could enter the harbour and anchor there if the garrison took the necessary precautions to prevent them. The inacessible nature of the coast, the only landing-place being at the Aquada del Inglis, at the foot of the Morro Gonzalo, and the position of the batteries, render a debarkation within their range impossible. On the land

side the defiles leading to the forts are so narrow, rocky, and steep, as to be easily and effectually defended by a small number of men against any force that could be brought against them.

The number of guns mounted upon these several batteries when taken possession of by Lord Cochrane were as follows;

No. of Pounders.

Pounders	24	16	14	12	8	4	2	1	Total.
Brass ..	17	4	12	4	13	1	1	1	53
Iron ..	57	4			1	11		2	75
	74	8	12	4	14	12	1	3	128

The brass guns were handsome pieces of ordnance, all mounted, and in an efficient state for service. The principal battery of Niebla, as well as that of Amargos, had each two furnaces for heating shot, for the guns of twenty-four pounds calibre.

The forts of San Carlos and Abanzada de Chorocomayo had each of them a similar furnace. A little in front of the principal wall of Coral Castle was a battery of four twenty-four pounders with a furnace for heating shot; and in Niebla, near its principal battery, was a fine twelve inch mortar, and ten howitzers, pedriros.

This place, unquestionably the strongest in the whole continent of Spanish America, was in an admirable state of defence with a garrison of 800 men, under the command of Colonel Hoyos, besides a body of troops in the town of Valdivia, at the beginning

of the year 1820, when Lord Cochrane returning from his first fruitless attack upon Callao, and being unwilling to return to Valparaiso until he had achieved something of importance, conceived the bold idea of carrying this strong hold of the Spaniards by a coup de main: he therefore sailed alone in the frigate O'Higgins to Valdivia, and under Spanish colours entered as far as the middle of the bay and surveyed it; satisfied of the practicability of his designs he went to Talcuhuano, obtained promptly from General Freyre a small detachment of 250 troops, commanded by Major Beauche, a Frenchman, which, together with his own mariners, under Major Miller, amounted to 318 men. With these he returned in the O'Higgins, which on account of her leaky state could with difficulty be kept from sinking by continual working of her pumps, having never less than eight feet water in her hold: accompanied by a small brig and schooner as transports, he kept out of sight of the signal posts, and on the evening of the 2d February landed the troops in the most orderly manner at the landing place of the Aquada del Inglis, outside of the harbour. The soldiers advanced to the attack with spirit, while he went in his boat to reconnoitre the condition of the forts, so that by hailing he could more effectually animate and direct their operations, as he had the fullest confidence in the bravery of the military commanders. So admirably were the measures taken, and so promptly executed, that the fort of the Aquada del Inglis was taken before the garrison had time to give the alarm. San Carlos was then stormed and taken, the garrison flying in the dark to Choromayo

Alto: so quick was the pursuit, that the conquerors in the dark entered pell-mell into the succeeding forts, which were opened to receive the affrighted Spaniards, who cried out to their comrades to be received: in this way before midnight the strong holds of Aquada del Inglis, San Carlos, Amargos, the two Chorocomayos, and Coral Castle, fell into the hands of the conquerors. Lord Cochrane brought his ship into the bay next morning, under a heavy fire from the enemy's forts, and anchored in front of Niebla, at the same time embarking the military from the opposite side in boats, so as to land them in two divisions, the one to storm Niebla and Piojo, the other to capture Manzanera: the affrighted garrisons, having seen the patriot flags hoisted on the opposite fortresses, and observing the O'Higgins lowering her ports to open a fire upon them, and at the same time perceiving the approach of the patriot troops, fled from their guns with precipitation towards the city, abandoning these strong holds to the possession of the victorious troops. Thus with a single ship and with less than half the number of troops which garrisoned these impregnable forts did the well-judging, brave, and gallant sailor capture the important post of Valdivia: his loss was only seven men killed and nineteen wounded; in the forts were captured the commander of the place, Colonel Hoyos, five commissioned officers, seventy-six non-commissioned officers and privates, besides a loss on the enemy's side of three officers and ten soldiers killed and twenty-one wounded. This is one of the most splendid feats ever recorded in history. All the military stores of the Spaniards

fell into his hands, among them upwards of a thousand cwt. of gunpowder, 10,000 cannon shot, of which 2,500 were brass, 170,000 musket cartridges, and other stores in proportion. The troops, including those who escaped from the batteries on the south-side during the night, as well as those flying from the north, retired with consternation to the town of Valdivia, whither Lord Cochrane followed them at the head of the soldiers, marines, and sailors: he marched to the plaza, or square, in the centre of which he planted with his own hand the independant standard of Chile: he found here no opposition, as the affrighted Spaniards had retired to the woods among the Indians. After arranging matters for the government of the town, leaving the troops in garrison, and the O'Higgins to be hove down in Coral Bay, in order to repair the terrible damage she had sustained on leaving Talcahuana Bay, he returned alone to Valparaiso in the little schooner Montezuma, which only mounted one single swivel gun, having his flag waving at the head of her small mast.

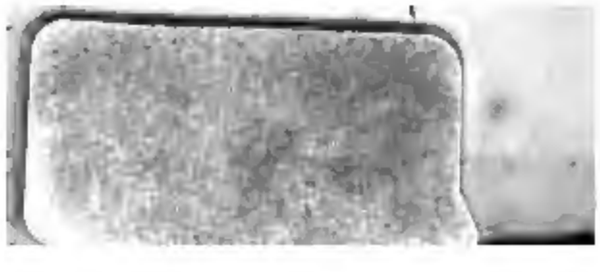
Lord Cochrane on his return, instead of being hailed by the government for the services he had rendered, was annoyed by every possible vexation; the Minister of War declaring, that instead of reward he deserved to have lost his life in the enterprise, as it was the act of a madman!!! This Minister secretly carried on a series of intrigues, the object of which was to degrade the Admiral, and lessen the glory which his brilliant services had so well deserved. This originated from motives of the most narrow-minded jealousy and the most unworthy

prejudices. He did not even receive a public acknowledgment of thanks for this brilliant exploit, till, for his own indemnification in having acted without orders, and for the satisfaction of the officers and men serving under him, he was obliged, after a long delay, to solicit the boon; and even then, the payment of prize money for the stores taken in the fortresses was actually refused to the victors! It was only when Lord Cochrane's indignation was raised at the ingratitude of the government of Chile, and it was feared he was about to retire in disgust, that the requisite form of thanks was conceded, that medals were distributed to the victorious troops, and that a mere nominal reward of the grant of an estate was given to Lord Cochrane as a compensation for his brilliant services.*

* The following anecdote is an apt illustration of Lord Cochrane, as a naval commander; it will show that, when once resolved on an enterprize which he considers practicable, no impediments, however discouraging, are sufficient to deter him:—

The leaky state of the Admiral's ship has been mentioned: it was occasioned thus: after having reconnoitred the harbour of Valdivia he returned to Talcahuano. His want of effective officers caused him the greatest difficulties; he had only two officers on board, and they were Lieutenants; one of these was under arrest for gross disobedience of orders, and the other was utterly incapable of performing the requisite duty of a lieutenant. Lord Cochrane was, therefore, compelled to perform the several duties of Captain and Lieutenant, and to take turn in the watch with his only officer. On leaving the bay of Talcahuano, the wind fell, and the ship was becalmed under the island of Quariquina; he did not leave the deck till after midnight, when having given his orders he went into his cabin to take a short repose. His order to the lieutenant was to call him upon the least stir of wind. Scarcely had the Admiral left the deck when the lieutenant quitted his post, leaving a young lad, a midshipman, in

command of the vessel. A breeze sprung up, and the lad, instead of calling the Admiral, attempted to work the ship himself, and run her on a sand bank close to the shore. The tide was falling, but Lord Cochrane, ever ready with means suited to the emergency of the case, succeeded in getting her off the bank; she was, however, considerably damaged. Part of her false keel was knocked off, and the planking called the garboard streak was crushed, and she made water fast. Lord Cochrane still, however, resolved to take the ship to Valdivia and accomplish his purpose. Notwithstanding the pumps were kept incessantly at work, the water increased to eight feet, she sailed badly, and every one except himself expected she would founder at sea. Finding that the water now no longer gained upon the pumps, he persevered, brought her off the high-land of Valdivia, where she remained during the night the place was captured. She was afterwards repaired and coppered on the spot.

END OF VOL. I.

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